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**CORRELATIONAL ANALYSIS OF THE FACTORS AFFECTING THE
COMPREHENSIVE EXAMINATION RESULTS OF MASTER IN BUSINESS
ADMINISTRATION (MBA) STUDENTS IN A HIGHER EDUCATION INSTITUTION**

Judy Ann O. Ferrater -Gimena

<https://orcid.org/0000-0001-5352-8253>

judygimena@gmail.com

University of Cebu

Cebu City, Philippines

Jose L. Pena

University of Cebu Graduate School

Cebu City, Philippines

Tertuliana Andaya

University of Cebu Graduate School

Cebu City, Philippines

Jessica B. Dela Cerna

happenstancejea@yahoo.com

University of Cebu Graduate School

Cebu City, Philippines

Norma O. Oplado

University of Cebu Graduate School

Cebu City, Philippines

ABSTRACT

This study aims to determine the relationship between the entrance examination mark, academic performance, and comprehensive examination results among the Master in Business Administration (MBS) students at the University of Cebu-Graduate School. This investigation utilized the descriptive correlational research design to assess the significant relationship between the entrance examination, academic performance, and comprehensive examination results of the Master of Business Administration students of the University of Cebu Graduate School. The study used secondary data from the Guidance Office and the Graduate School. Master in Business Administration (MBA) students had average intelligence quotient and below-average performance abstract reasoning, numerical, language, and verbal reasoning ability. Additionally, more had very good academic and comprehensive examination performance. There is no significant relationship between the research subjects' intelligence quotient (IQ) and their grade point average (GPA) and comprehensive examination performance.

Moreover, the performance of the MBA in the psychometric or entrance examination is not a predictor of whether they perform well in the subjects or courses they took, and likewise, the IQ is not enough to measure whether the students will pass the comprehensive examinations. However, the Grade Point Average (GPA) of the MBA students is a predictor of their success in

the comprehensive exams, although to a lower extent. So, the teaching-learning approach in the MBA program should intensify various methodologies that optimize the student's learning in the courses to prepare them in overcoming the hardships in passing the subjects they have to take for the comprehensive exams.

Keywords-Academic performance, comprehensive examination, correlation, Philippines

INTRODUCTION

The favorable environment provides essential features and ingredients that could make headway in guiding the teaching-learning process and methodologies needed for the smooth linkage among the three (Corpuz & Salandanan, 2013). Learning a complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience. The successful learners are active, goal-directed, self-regulating, and assume personal responsibility for contributing to their learning. Over time and with support and instructional guidance, one can create a meaningful and coherent representation of knowledge (Lucas & Corpuz, 2014).

Advanced graduate study is a continuing professional education that caters to the needs of individuals from industries and academe to enhance further the knowledge and skills suitable for their respective work assignments. Many theories explicitly connect the importance of education as a means of investment in human capital formation that could result in economic development and productivity growth (Janer et al., 2015). Master of Business Administration is a program meant for those students who are preparing themselves with the skills and competency in the functional area as business and business law, accounting and finance, marketing and management, strategic decision-making process, and other matters about business and societal issues (Menez, 2014).

Hence, if a person's long-term goal is to manage his own business or become a top-notch employee, studying (use the word pursuing instead of studying), an MBA program will give him or her an edge over the others. The program provides a deeper understanding of the rudiments of running a business, such as managing human resources, marketing, strategic management, business valuation, reputation management, to mention a few. Aside from the theoretical concepts that the student will learn from the MBA program, he will also be immersed with various real case problems confronting businesses today, thereby honing his skills and competencies of addressing them in the future.

The Master of Business Administration (MBA) program aims to add value to the graduates and equip them with specific competencies so that they will become better managers and leaders (Baruch et al., 2005). This is seen in enhanced managerial skills, self-confidence, and several aspects of career development (Baruch & Leeming, 2001). The program focuses on academic development, employment opportunity, and enhancing leadership capability (Macatangay, 2013).

On the part of the university, which offers the Master in Business Administration program, keeping up with the demand of producing quality graduates that possess the knowledge, skills, and competencies required for business managers, leaders, and consultants are challenges that need to be met. Hence, the educational institution should continuously upgrade their quality of educational services, especially on instruction, since that would be the impetus of molding competent business professionals. Passing a written comprehensive examination is one of the

requirements for a graduate degree. It is mandated for all graduate degree programs within the university by the graduate department (Gothberg & Aleamoni, 1988).

However, there were numerous cases wherein students would experience lots of hardships in passing the comprehensive examinations right after they were able to pass the courses in the MBA curriculum and comply with the required number of units. Some would even fail some subjects the said examination even though they had passed the subject. Thereby, according to Kassarnig et al. (2018), identifying the factors that influence academic performance is an essential part of educational research. Previous studies have documented the importance of personality traits, class attendance, and social network structure. Because most of these analyses were based on a single behavioral aspect and/or small sample sizes, there is currently no quantification of the interplay of these factors.

The University of Cebu, as an institution of higher learning, needs to evaluate whether or not the educational process intends towards producing competitive graduates who possess managerial and business skills so that they can take higher positions in the business organizations where they are employed. Also, the assessment aims to evaluate whether the curriculum addresses the competency requirements of the labor and entrepreneurial market. To be able to improve the quality of instruction provided to the MBA students in the University of Cebu-Graduate School, this investigation primarily aims to reveal the relationship between the psychometric examination performance of the students prior to enrolment in the MBA program based on their intelligence quotient (IQ), abstract reasoning, numerical aptitude, language comprehension, and verbal aptitude with their academic performance, and with their performance in the comprehensive examination, which is the primary requirement before finally obtaining the degree. In this manner, appropriate intervention schemes can be implemented to address the gaps and concerns in helping the MBA students hurdle the program's academic requirements.

FRAMEWORK

This study is anchored on Gagne's Conditions of Learning Theory, which specified several different types or levels of learning. He stressed that different internal and external conditions are needed for each type of learning. The theory has been utilized to design instruction in all domains. He named five categories of learning: verbal information, intellectual skills, cognitive strategies, motor skills, and attitudes. Specific internal and external conditions are required for each type of learning. For instance, for cognitive strategies to be learned, there must be an opportunity for problem-solving learning attitudes, the learner must be exposed to credible role models or arguments that are convincing and moving. Gagne further suggests that learning tasks for intellectual skills can be organized in a hierarchy according to complexity: stimulus recognition, response generation, procedure following, use of terminology, discriminations, concept formation, rule application, and problem-solving. The primary significance of the hierarchy is to identify prerequisites that should be completed to facilitate learning at each level. There are prerequisites identified in doing a task analysis of a learning/training task, and the learning hierarchies provide the basis for the sequencing of instruction. The learning events operate on the learner in ways that constitute learning conditions. These events should satisfy or provide the necessary conditions for learning and serve as the basis for designing instruction and selecting appropriate media (Lucas & Corpus, 2014). Since the learning outcomes of the Master

in Business Administration program has wide-range of applications, it requires different kinds of learning, as indicated by Gagne, to enable the students to climb to the ladder of success.

In addition, each category requires different methods for the particular skill set to be learned. Gagne suggests that learning tasks for intellectual skills can be organized in a hierarchy according to complexity: stimulus recognition, response generation, procedure following, use of terminology, discriminations, concept formation, rule application, and problem-solving. The primary significance of the hierarchy is to identify prerequisites that should be completed to facilitate learning at each level. Prerequisites are identified by doing a task analysis of a learning/training task. Learning hierarchies provide a basis for the sequencing of instruction (The Northeast Texas Consortium, n.d.).

He further suggested that the organization of responsibilities for cognitive aptitude can be in a pyramiding consonance to intricacy: inducement identification, replay creation, abiding of rules, and utilization of vocabulary, judgments, idea conception, usage of the statute, and management of drawbacks. The chief importance of the leveling is to point out preconditions that should be undertaken to enable learning at each stage. Some preconditions are categorized through undertaking a job inquiry of coaching/imparting work. Studying hierarchies afford a foundation for the order of directives (Jono et al., 2013.)

Charles Spearman suggested that there is one mental attribute, which he called *g* or intelligence, that is used to perform any mental test, but that each test also requires some specific abilities in addition to *g*. For example, memory for a series of numbers probably involves both *g* and some specific ability to recall what is heard immediately. Spearman assumed that individuals vary in both general intelligence and specific abilities and that together these factors determine performance on mental tasks (Woolfolk, 2001). The psychometric theory of Charles E. Spearman entitled: "Model of Intelligence" explained that people who excelled on one mental ability test often did well on the other and vice-versa. He found out that many seemingly diverse mental tests were strongly correlated with each other. This led him to postulate a general factor of intelligence and the premise that all mental test measure in common while simultaneously varying how much the general factors contributes to given test performance (Motley, 2006).

Anyone who wishes to take the Master in Business Administration program in the university has to take and pass the entrance examination or psychometric examination. Psychometric measurements have generally sought to understand the structure of facts about human intelligence. It is a highly specialized field of psychology that is concerned with the procedures for measuring and evaluating the many psychological variables such as intelligence, interest, learning, memory, and personality utilizing structured tests taken in exam-like conditions which underlie and affect behavior to explore personal attributes like career or employment interests, values, attitudes and motivation (Parkinson, 2004). Hence, experts define intelligence as having three dimensions: the ability to acquire knowledge, the capacity to think and reason in the abstract, and the ability to solve novel problems (Snyder & Rothman, 1987).

Some learning theorists equate student's ability to acquire knowledge-also called aptitude-with the time and quality of instruction the student needs to master a subject (Bloom, 1981). In this view, learners with high aptitude need less time and instruction than those whose aptitude is lower. From another perspective, intelligence is defined as the attributes that intelligence tests measure. Because scores on different measures of intelligence, such as verbal ability and abstract reasoning, were highly correlated (a learner scored similarly high or low for all measures), early researchers believed intelligence to be a single trait (Eggen & Kauchack, 2004). So passing the

subjects in the curriculum and the comprehensive examinations as one of the final requirements in obtaining the degree requires intelligence and the right attitude to learn.

Intelligence quotient (IQ) is a number meant to measure people's cognitive abilities (intelligence) concerning their age group. An IQ between 90 and 110 is considered average; over 120 is superior. It all started with the Binet scale with one goal in mind, to serve as a guide in identifying children in the school who need special education to minimize their low level. Binet also reported that it is not designed to measure intelligence. Later after many modifications to the original method of Binet, such as Simon-Binet, or Stanford-Binet, Intelligence tests were getting more popular among the population and government departments (Brain Metrix. (2007-2018). The idea that people vary in intelligence has been with for a long time. Most early theories about the nature of intelligence involved one or more of the following three themes: (1) the capacity to learn; (2) the complete knowledge a person has acquired; and (3) the ability to adapt successfully to new situations and the environment in general (Woolfolk, 2001).

Children probably do not inherit a single IQ gene that determines their intellectual ability. However, they do not inherit a variety of characteristics that, in one way or another, affect their cognitive development and intellectual abilities (Omrod, 2006). Further, the students must be able to perceive accurately to be able to learn new things, to recognize and recall what has been perceived, to think logically, perceive relationships, abstract from the set of particulars as well, and apply a generalization to a new and different context (Myers & Hansen, 2006). By evaluating a student's performance on various tasks, OLSAT-G (8) assesses those abilities related to success in school. Tasks such as detecting likeness and differences, recalling words and numbers, defining words, following directions, classifying, establishing sequence, solving arithmetic problems, and completing analogies are valid measures of an individual's ability to reason logically (Gooding, 2001).

The American Psychological Association put the Learner-Centered Psychological Principles together. The following 14 psychological principles pertain to the learner and the learning process. They focus on psychological factors that are primarily internal to and under the learner's control rather than conditioned habits or physiological factors. However, the principles also acknowledge the external environment or contextual factors that interact with these internal factors. The principles are intended to deal holistically with learners in real-world learning situations. Thus, they are best understood as an organized set of principles; no principle should be viewed in isolation. The 14 principles are divided into those referring to (1) cognitive and metacognitive, (2) motivational and practical, (3) developmental and social, and (4) individual differences factors influencing learners and learning. Finally, the principles are intended to apply to all learners – from children to teachers, administrators, parents, and community members involved in our educational system (Lucas & Corpuz, 2014).

The Guidance Center used the Differential Aptitude Tests (DAT) to measure intelligence quotient (IQ). Corpuz and Salandanan (2013) explained that aptitude refers to the learner's innate talent or gift. It indicates a natural capacity to learn specific skills. The powers of memory, imagination, concept formation, reasoning, and judgment on matters related to the arts function best for those who exhibit extraordinary inclination for the arts. Likewise, the same cognitive powers are at their peak in mathematics According to the Psychological Corporation (1991), aptitude is the capacity to learn given appropriate training and environmental input. In other words, aptitudes are not inherited; instead, they are considered developed abilities. Using the above definition of aptitude, the philosophical basis of the DAT involves the premise that human

intelligence or mental ability is made up of many different aptitudes and that these aptitudes must be measured from several points of view.

The eight important aptitudes to be measured are (1) the Verbal Reasoning test which measures the ability to see relationships among words. This test may be helpful to predict success in academic courses, as well as in many occupations, including business, law, education, journalism; (2) The Numerical Reasoning test measures the ability to perform mathematical reasoning. It is crucial for success in mathematics, physics, chemistry, and engineering. The ability to reason with numbers is also important in many occupations, such as bookkeeping, laboratory work, carpentry, and tool-making; (3) Abstract Reasoning test is a nonverbal measure of reasoning ability. It assesses how well students can reason with geometric figures or designs. The abstract reasoning score will often be necessary when a course in school and/ or an occupation require(s) the ability to see relationships between objects in terms of their size, shape, position, quantity, and others rather than among words or numbers. Examples include such fields as mathematics, computer programming, drafting, and automobile repair; (4) Perceptual Speed and Accuracy test measures the ability to compare and mark written lists quickly and accurately. The test items do not call for reasoning skills; instead, the emphasis is on speed; (5) The mechanical reasoning test measures the ability to understand basic mechanical principles of machinery, tools, and motion. Students who do well in mechanical reasoning usually find it easy to learn how to repair and operate complex devices; (6) The space relations test measures the ability to visualize a three-dimensional object from the two-dimensional pattern and to visualize how this object would look if rotated in space; (7) The Spelling test measures how well students can spell common English words. The ability to spell is an essential skill necessary in many academic and vocational pursuits. It is also a helpful skill in courses requiring written reports; (8) The Language Usage test measures the ability to detect grammar, punctuation, and capitalization errors. Well-developed language skills are needed in most jobs requiring a college degree. Careers in writing and teaching require a high level of ability in this area. The Language Usage and Spelling tests are included in the DAT because the skills they measure are crucial in school and work. The combined Verbal Reasoning and Numerical Reasoning score measure general scholastic aptitude or the ability to learn from books and teachers and perform well in school subjects (The Psychological Corporation, 1991).

The important aspect that this investigation intends to measure is the relationship between intelligence and the student's academic performance and its correlation to the comprehensive examinations. In educational institutions, success is measured by academic performance, or how well a student meets standards set out by the local government and the institution itself. As career competition grows ever more fierce in the working world, the importance of students to be doing well in school has caught the attention of parents, legislators, and government education departments alike (Lupdag, 2002). Hanson (2000) reported that students' performance is affected by different factors such as learning abilities, gender, and race. Simmons et al. (2005) concluded that family income level, attending full time, receiving grant aid, and completing advanced level classes in high school have statistically significant effects on college persistence among first-generation college students.

According to Hinrich and de Groot (1990), self-efficacy and intrinsic value were positively related to cognitive engagement and academic performance. Regression analyses revealed that self-regulation, self-efficacy, and test anxiety emerged as the best predictors of academic performance depending on the outcome measure. Intrinsic value did not directly influence performance but was strongly related to self-regulation and cognitive strategy use, regardless of

prior achievement level. On the other hand, the three non-intellective constructs were found to have medium-sized correlations with GPA: academic self-efficacy, grade goal, and effort regulation. A significant correlation was observed for performance self-efficacy, the strongest correlate followed by high school GPA, ACT, and grade goal (Richardson et al., 2012).

In higher education, a comprehensive examination (or comprehensive exam or exams), often abbreviated as "comps," is a specific type of examination (EDTEC Comprehensive Examination, 2006) that must be completed by graduate students in some disciplines and courses of study, and also by undergraduate students in some institutions and departments. Unlike final examinations, comprehensive examinations are not linked to any particular course but rather test knowledge across one or more general fields of study (Stuart, 2014). Graduate-level comprehensive examinations are sometimes also known as preliminary examinations (prelims), general examinations (generals), qualifying examinations (quals), or significant field examinations. If these examinations are held orally, they may be known colloquially as orals. The comps most commonly come after the student completed the required coursework and before starting on the dissertation: the successful passage of the comps is sometimes required for a student to be considered a Ph.D. candidate (Tewari, 2012).

In some terminal non-thesis Master's programs, successful completion of a comprehensive examination, conducted online or through the university's testing center, is a requirement for graduation during a student's last semester of coursework. A prominent example of such is the Major Field Test for Master in Business Administration (MFT-MBA), used in the MBA programs of over 300 U.S. universities (Major Field Tests, n.d.). In the context of this investigation, it reviews various studies that relate to the predictors of academic performance and correlation of the psychometric performance and the academic performance to gain broader perspectives on the existing literature about the relationship between the psychometric examinations and academic performance as well as with other impetus of learning.

McKenzie and Schweitzer (2001) conducted a prospective study to explore the psychosocial, cognitive, and demographic predictors of academic performance of first-year Australian university students. Results demonstrate that previous academic performance was identified most significant predictor of university performance. Integration into university, self-efficacy and employment responsibilities were also predictors of university performance.

The study of Tan (2012) determined the psychometric tests and the academic performance of irregular students in a university. The findings revealed that most of the subjects were females and 20 years old. They had an average rating on the IQ test, poor reading comprehension, and below-average arithmetic ability. They only attained a passing rate in their academic performance with a mean of 2.84, near the failing grade of 3.1. There was a significant correlation between students aged 23 years old and IQ and academic performance of those aged 22 years. Also, another correlation was found in the arithmetic and academic performance, reading Comprehension of 20 years old, and academic performance. There was a significant correlation between arithmetic and academic performance, so reading comprehension and academic performance were found among females. There is also a significant correlation between gender and arithmetic ability, reading comprehension, and academic performance. Reading Comprehension affects their academic performance, and the entrance examination is a determinant factor in their academic performance.

OBJECTIVES OF THE STUDY

This study determined the Master in Business Administration students' entrance examination mark, academic performance or grade point average, and comprehensive examination performance. It also determines the relationship between the entrance examination marks, academic performance, and comprehensive examination results among the Master in Business Administration students.

RESEARCH METHODOLOGY

This investigation utilized the descriptive correlational research design to determine the significant relationship between the entrance examination marks, academic performance, and comprehensive examination results of the Master of Business Administration students of the University of Cebu Graduate School. Using the purposive sampling technique, the study was conducted at the University of Cebu Graduate School with one hundred forty-four (144) research subjects. The data were obtained from the Registrar's Office for the research subjects' academic performance records, Guidance Office for the entrance examination scores, and the Graduate School Office for the information pertaining to the comprehensive examination results. The statistical treatment used for data analysis was a simple percentage for data on the academic performance and comprehensive examination results and Chi-Square Test of Independence and Cramer's to analyze the data on the significant relationship between the entrance examination scores and their academic performance, and comprehensive examination results of the research subjects.

RESULTS AND DISCUSSIONS

This section displays the analysis and interpretation of the data about the entrance examination scores, academic performance, and comprehensive examination results of the Master in Business Administration (MBA) students at the University of Cebu. The data are presented in tabular form with corresponding analysis and interpretation. The sources of data on the entrance examination scores of the students prior to their enrolment in the MBA program were obtained from the records of the Guidance Center, for their academic performance in terms of GPA, the records were obtained from the Registrar's Office; while the comprehensive examination results were sourced from the Graduate School Office.

Table 1. Entrance Examination Results (n = 144)

Indicators	Frequency (f)	Percentage (%)
IQ		
Superior	4	2.80
Above Average	22	15.30
Average	109	75.70
Below Average	8	5.50
Low	1	0.70
Abstract Reasoning		
Average	23	16.00

Below Average	94	65.30
Low	27	18.70
Numerical		
Average	25	17.40
Below Average	90	62.50
Low	29	20.10
Language		
Average	9	6.20
Below Average	97	67.40
Low	38	26.40
Verbal		
Average	10	6.90
Below Average	95	66.00
Low	39	27.10

Legend: 128 and above-Superior; 112-127- Above Average; 88-111-Average; 78-87-Below Average; 71 and below-Low

Table 1 revealed that there were one hundred nine (109) of the one hundred forty-four (144) research subjects or equivalent to 75.70% had average intelligence quotient (IQ). It can be noted that there were four (4) subjects who had superior IQ, while there was only one (1) or consisting a proportion of .70% who had low IQ. This result denotes that majority of those individuals who enrolled in the Master in Business Administration (MBA) program have an IQ between 90 and 110 that is considered average (Brain Metrix, 2007-2018). The data relates to the previous study conducted by Tan (2013) which reveals that the subjects IQ were majority at the average level. In addition, there were ninety-four (94), comprising of 65.30% who had below abstract reasoning ability, while only twenty-three (23) or a proportion of 16% who had average abstract reasoning aptitude and there were twenty-even (27) or 18.70 % who low ability to reason with geometric figures or designs. This indicates that most of the students who enrolled in the MBA program had inferior ability to see the underlying logic in a pattern of symbols or shapes instead of relying on words or numbers. This results indicates that students in the graduate program should be placed in a situation or condition wherein their potentials and their strenghts will be progressed based on the Conditions of Learning Theory of Gagne.

Moreover, there were ninety (90) research subjects who had below numerical ability, while only twenty-five (25) of them or corresponding to 17.40% who had average numerical or arithmetic competence. However, there were twenty-nine (29) research subjects who had low numerical reasoning. This result denotes that majority of the students in the MBA program had demonstrated inferior ability to deal with numbers quickly and accurately. Further, ninety-seven (97) research subjects or equivalent to 67.40% had below average language comprehension, and a proportion of 6.20%, consisting of nine (9) MBA students who had average language intellectual capacity. On the other hand, it can be noted that there were thirty-eight (38), comprising of 26.40% who had low language proficiency. This result signifies that majority of the MBA students in the university had lower ability to use language for real-world purposes to accomplish real-world linguistic tasks across a wide range of topics and settings. This result is the same with the findings of the study conducted by Tan and Villegas, which revealed that majority of the research subjects had below average reading comprehension.

Lastly, there were ninety-five (95) or equivalent to 66% of the research subjects who had below average verbal reasoning ability and only ten (10) or a proportion of 6.90% who had average verbal reasoning aptitude. However, a proportion of 27.10% or thirty-nine students had low verbal proficiency. This result can be inferred that majority of the MBA students had below average ability to reason using concepts wrapped in words and low ability to be able to verify the

level of understanding and comprehension, as well as dexterity when it comes to filtering out key information from a bulk of text. In the times of the information overload- a good level of literacy and verbal logic are among the most desired employability skills. Hence, the teachers should adopt the lesson design in which the students will be given the chance to harness their ability to use their logic and critical thinking skills.

Table 2. Academic Performance (n=144)

Indicators	Frequency (f)	Percentage (%)
Excellent	3	2.10
Very Good	140	97.20
Good	1	0.70

Legend: 1.0 -Excellent; 1.1-1.49-Very Good; 1.5-1.89- Good; 1.9-2.0-Fair; 5.0 Failure

The data contained in Table 2 reveals that there were one hundred forty (140) or equivalent to 97.20% who had a very good academic performance based on Grade Point Average (GPA), while there was only one (1) subject who had good performance in the subjects taken on enrolled. It is observable that only three (3) or 2.10% have excellent performance in the courses they took in the Master in Business Administration (MBA) program. This result indicates that the majority of the Master in Business Administration (MBA) students did well in meeting the standards set out by the educational institution itself. The fewer students believed in quick learning, the higher their GPA (Schommer, 1993). However, the academic success attained by the research subjects is primarily caused by their intelligence coupled with diligence, considering that they have to juggle their time between work and their studies.

Table 3. Comprehensive Examination Results (n=144)

Indicators	Frequency (f)	Percentage (%)
Very Good	67	46.50
Good	26	18.10
Fair	30	20.80
Failure	21	14.60

Legend: 1.0-Excellent; 1.10-1.49-Very Good; 1.50-1.89- Good; 1.90-2.0-Fair; 5.0 Failure

The data contained in Table 3 shows that there were sixty-seven (67), comprising of 46.50 % who had a very good performance during the comprehensive examination. On the other hand, it can be noted that there were twenty-one (21) or 14.60% who failed when they first took the abovementioned exam. This data connotes that there were more MBA students who had remarkable performance during the comprehensive exams, although the fact cannot be denied that there are still students who were either unprepared to take the exam or had not learned in their subjects that will enable them to be successful in the abovementioned test.

Table 4. Relationship Between the Research Subjects' IQ and Academic Performance

Variables	Computed Chi square	P value	Cramer's V	Decision on Ho	Interpretation
IQ and Academic Performance	6.5992	0.5804	0.1514	Accept Ho	Significant

Tested at $\alpha \leq 0.05$

The data in Table 4 shows that the P-value of 0.5804, which is greater than 0.05 level of significance, denotes a significant relationship between the research subjects' intelligence quotient and their academic performance. So, the null hypothesis is accepted. This result indicates no connection between the research subjects' IQ when they took the entrance examination prior to enrolment in the Master in Business Administration program and their performance in the subjects or courses they took. This result contradicts the findings of the study done by Gimena et al. (2015), which revealed no significant relationship between the IQ and the academic performance or Grade Point Average (GPA) of the subjects.

Table 5. Relationship Between Research Subjects' IQ Performance and their Comprehensive Exam Result

Variables	Computed chi square	P value	Cramer's V	Decision on Ho	Interpretation
IQ and Comprehensive Exam	15.6766	0.2605	0.1905	Accept Ho	Significant

Tested at $\alpha \leq 0.05$

The data in Table 5 shows that the P-value of 0.2605 is more significant than 0.05 level of significance signifies that there is a significant relationship between the intelligence quotient (IQ) of the research subjects and their performance in the comprehensive examination that was given as one of the final requirements in obtaining the Master in Business Administration degree. Thus, the null hypothesis is accepted. This result shows that the IQ is the primary predictor for the Master in Business Administration (MBA) students' success or performance during the comprehensive examination.

Table 6. Relationship Between the Research Subjects' Academic Performance and their Comprehensive Examination Performance

Variables	Mean	sd	Critical t	P value	Decision on HO	Interpretation	Correlation r	Remarks
Comprehensive Exam	1.82	0.678	3.015	0.0029	Reject Ho	Significant	0.2467	Weak Relationship
Academic Performance	1.28	0.098						p

Tested at $\alpha \leq 0.05$

Legend: 0.00-0.19-Very Weak; 0.20-0.39-Weak; 0.40-0.59-Moderate; 0.60-0.79-Strong; 0.80-1.0-Very Strong

The data in Table 6 shows that the P-value of 0.0029 is lesser than the 0.05 level of significance, which indicates a significant relationship between the grade point average and comprehensive examination performance of the Master in Business Administration students. Hence, the hypothesis is rejected. This result means that the student's performance in the courses that they enrolled in connects to whether they passed the comprehensive examination or not. So, if they did well in the subjects, they tend to hurdle the difficulty in the comprehensive examination.

CONCLUSIONS

The students who took the Master in Business Administration (MBA) had mediocre intelligence quotient and below-average performance in the Differential Aptitude Test (DAT) but have exemplary academic and comprehensive examination performance. Moreover, the performance of the MBA in the psychometric or entrance examination is a predictor of whether they perform well in the subjects or courses they took, and likewise, the IQ is the primary requirement in taking the course and to measure as to whether the students will pass the comprehensive examinations. Moreover, the Grade Point Average (GPA) of the MBA students predicts their success in the comprehensive exams. So the teaching-learning approach in the MBA program should intensify various methodologies that optimize the student's learning in the courses to prepare them for overcoming the hardships in passing the subjects they have to take for the comprehensive exams.

RECOMMENDATIONS

Concerning the finding of this study, the program head of the Master in Business Administration program and the dean of the University of Cebu Graduate School should undertake the intervention scheme with emphasis on concretizing the teaching-learning process that maximizes the competence of the students to become business practitioners and leaders. The intervention scheme shall include class activities in which the students will directly connect the knowledge written in the resource materials and those gained in their job. In this manner, the teaching focus addresses the real needs of the business industry where the students are key players.

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SELECTED CHARACTERISTICS OF EDUCATION GRADUATE STUDENTS AS PRECURSORS OF COMPREHENSIVE EXAMINATION SUCCESS

Rex T. Argate

<https://orcid.org/0000-0002-2298-2637>

argaterex@yahoo.com

University of Cebu

Cebu City, Philippines

Richard T. Alcantara

<https://orcid.org/0000-0002-0287-9624>

urich.art5@gmail.com

University of Cebu

Cebu City, Philippines

Delfin T. Cabañero

<https://orcid.org/0000-0003-4200-5267>

delfincabanero@gmail.com

University of Cebu

Cebu City, Philippines

ABSTRACT

This retrospective quantitative study determined the predictive relationship among select academic characteristics of graduate students in Master of Science Teaching (MST) and their success in the Comprehensive Examination at the University of Cebu during the Academic Years: 2015 – 2019 as a basis for curriculum improvement. Specifically, this study looked into 1) the academic characteristics of the students in terms of intelligent quotient (I.Q.), graduate academic grade point average (GPA), and comprehensive examination grades average (CEA); 2) and whether the selected academic characteristics of the students can predict success in their Comprehensive Examination. The study utilized the retrospective quantitative research design using primary data. The study was conducted at the Graduate School, the University of Cebu, located at Sanciangko Street, Cebu City. The data on the students' comprehensive examination results for the school year 2015-2019 was retrieved from the Graduate School Office, while the data on the graduate academic grades average was retrieved from the Registrar's Office.

The study used the following statistical treatment: frequency count and percent to summarize the demographic profiles of the students; simple mean to summarize the level of performance in the academic variables, and multiple linear regression analysis to determine the predictive value for each factor towards students' success in the comprehensive examination. The Master of Science in Teaching (MST) students have an average intelligence quotient (I.Q.) and a very good level of academic characteristics. It further revealed that their IQ and GPA are not good predictors of their success in the comprehensive examinations.

Keywords-Education, academic characteristics, predictive relationship, Philippines

INTRODUCTION

In higher education, a comprehensive examination is a specific type of examination that must be completed by graduate students in some disciplines and courses of study, but it is a requirement for any graduate degree. Unlike final examinations, comprehensive examinations are not linked to any particular course but rather test knowledge across one or more general fields of study. The comprehensive examination most commonly comes after the student has completed the required coursework and before starting on his or her thesis.

Recent research has suggested that comprehensive exams can and do engage high-order levels of thinking, as discussed in Bloom's taxonomy, including application, synthesis, analysis, and evaluation (Simkin & Kuechler, 2005). Another significant characteristic of the comprehensive exam as an assessment tool is that it can genuinely authenticate student learning (Wagenaar, 2004). A comprehensive exam is an integral piece of an overall program assessment because it does provide a measure of quantitative, objective feedback to add to the more subjective and qualitative information received from other assessment methods, such as focus groups and analysis of student writing.

Schools can choose to administer a standardized comprehensive examination made by the committee for each subject or to produce their own 'teacher-made' comprehensive exam. Developing a teacher-made test may better reflect departmental and institutional teaching and learning goals. Unfortunately, the major problem with developing a local test instead of utilizing one with national availability is that there are no standards for comparison with national data.

The University of Cebu-Graduate School uses a teacher-made comprehensive exam to measure whether or not its students have mastered the competencies expected from them in each subject. However, the proponents, being faculty members of the Graduate School for some years, have observed that while a comprehensive exam is regularly given to graduate students after the completion of their academic subjects, no study has been conducted to assess whether or not the exam result could be a predictor of the student's final grade. Thus, this study was conducted to determine the characteristics of the graduate students that lead to their success during the comprehensive examinations.

RELATED LITERATURE

Assessment is a buzzword in Higher Education Institutions (HEIs) today. However, assessing the quality of higher education was not always a priority for colleges and universities. The push for higher education assessment began in earnest in the mid-1980s, when colleges and universities produced a report declaring that higher education institutions were unaware of the effectiveness of their methods on student learning. This report was a loud call for institutions and departments to ensure that quality education was provided. Since that time, the number of higher education institutions engaged in the process has grown tremendously, and currently, almost all institutions of higher education are engaged in assessing their education goals (Chun, 2002). Accreditation organizations are also increasingly requiring and assisting institutions and departments to develop and refine assessment techniques.

Comprehensive exams are a standard assessment method in higher education, yet there has been some criticism of using this method to measure student learning. Morris (n.d.) stated that comprehensive exams emphasized memorization and not enough emphasis on problem-solving.

Another major criticism of the comprehensive exam as an assessment tool is that it cannot authenticate student learning.

Other scholars believe that students may not take comprehensive exams seriously if their grades are not affected (Meadows et al., 1998). Despite these criticisms, researchers suggest that the comprehensive exam may be more critical because of its dual functions of assessing what students should know upon finishing coursework and departmental effectiveness (Banta & Schneider, 1986).

Pelfrey and Hague (2000) echoed those purposes when they stated that the comprehensive exam should 'respond to the needs of the student and the needs of the program. There are indirect benefits to administering a comprehensive exam for departmental assessment purposes. Prior research has shown that while some faculty members may initially be reluctant to engage in assessment, especially those concerned that 'their areas of expertise will show slight improvement, assessment often brings faculty together to strive for common goals in student learning. For example, Banta and Schneider (1986) found that critical indirect benefits of assessment were to act as a catalyst to increase dialogue about pedagogical issues among faculty and increase consciousness about departmental curricula and individual course learning objectives. These additional benefits are especially common to departments engaged in local comprehensive exam development.

Departments can administer a standardized comprehensive exam or produce their own 'home-grown' comprehensive exam. Developing a local test may better reflect departmental and institutional teaching and learning goals. Unfortunately, the major problem with developing a local test instead of utilizing one with national availability is that there are no standards for comparison with national data (Erwin, 1991).

Regardless of which type of test is utilized, some factors may affect student exam performance, like intelligence quotient (I.Q.) and grade point average (GPA). Studies repeatedly show that I.Q. is correlated with school performance/achievement. Students have higher I.Q. Scores better on school grades, perform better on achievement tests, and complete more years in education.

Dean et al. (2008), in their study on the relationship between I.Q. and test performance, found out that test participants with the lowest I.Q. (50-59) failed approximately 60% of the test, while participants with an I.Q. of 60-69 failed 44% of the test and individuals with borderline I.Q. (70-79) exhibited a 17% failure rate. The correlation between intelligence and achievement increases as the samples included in studies become more representative of the general population. The predictive validity of intelligence for achievement has been well demonstrated across ethnicity. In addition, intellectual abilities are predictive of achievement in reading, mathematics, social sciences, and science for all students regardless of ethnicity (Lohman, 2005). Intelligence is also related to the rate of learning. Several researchers demonstrated the relationship between I.Q. scores and academic progress, with evidence that students with higher I.Q. scores show significantly more significant academic progress in reading and writing than those with lower I.Q. scores (Wise et al., 1999).

A review of the education literature on general intelligence attributes the relationship between I.Q. and achievement to the circumstances encountered in the learning environment. Ceci (1994) claims that measurement of general cognitive ability means simply educational achievement or acquired knowledge and argues that I.Q. scores are nothing more than school-related achievement scores. He also considers intellectual abilities partially a product of scholastic performance. Jensen (1998) counter-argued that the strong correlation between

intellectual abilities and scholastic performance did not mean that one predicts the other as there were other factors to consider for the unexplained variance. He stated that the two were strongly correlated but distinct constructs, and therefore it was inappropriate to assume that intelligence and achievement were equivalents.

Previous academic performance also may influence exam scores. Research has found that the grade point average (GPA) reflects students' academic achievement. Love (1992) tested the validity of the use of the GPA as a criterion for student selection. He compared the cumulative science GPAs of applicants on initial admission to the medical technology program at West Virginia University with the scores on a comprehensive examination administered after the program and the scores obtained by students on the certifying examination given by the Board of Registry of ASCP.

Bettinger et al. (2011) believed that the grade point average (GPA) is a quantitative measure of academic success. They conducted a study between the correlation of GPA and ACT scores and found out that the participants' high school GPAs were highly correlated with their college Mathematics and English scores. GPAs correlate to academic success because they provide a consistent measure of a student's mathematics, reading, and other subjects. It also captures whether a student consistently attends class and completes her assignment on time (McGrew, 2005). Hence, the student taking a graduate degree should prepare for their comprehensive examination from the first day of attending the classes in each course.

OBJECTIVES OF THE STUDY

This retrospective quantitative study determined the predictive relationship between the selected academic characteristics of graduate students in Master of Science Teaching (MST) and their success in the Comprehensive Examination at the University of Cebu Graduate School during the academic years, 2015 – 2019, with the end view of improving the curriculum. Specifically, this study looked into 1) the academic characteristics of the students in terms of intelligent quotient (I.Q.), graduate academic grade point average (GPA), and comprehensive examination grades average (CEA); and 2) and whether the selected academic characteristics of the students can predict success in their Comprehensive Examination.

METHODOLOGY

The study utilized the retrospective quantitative, particularly correlation research design using secondary data. A retrospective study design allows the investigator to formulate hypotheses about possible associations between an outcome and an exposure and to further investigate the potential relationships. The study was conducted at the Graduate School, University of Cebu located at Sanciango Street, Cebu City. It offers graduate courses in Education, Criminal Justice, Nursing and Business Administration. The data on the students' comprehensive examination results for the school year 2015-2019 was retrieved from the Graduate School Office while the data on the graduate academic grades average was retrieved from the Registrar's Office. The study used the following statistical treatment: 1) frequency count and percent to summarize the demographic profiles of the students; 2) simple mean to summarize the level of performance in the academic variables; and 3) multiple linear regression

analysis to determine the predictive value for each factor towards students' success in the comprehensive examination

RESULTS AND DISCUSSIONS

Table 1 presents the data concerning the selected academic characteristics of the Master of Science in Teaching students.

Table 1. Graduate Students' Academic Characteristics (n=54)

Academic Profiles		Frequency (f)	Percentage (%)
Intelligent Quotient (I.Q.)	Above Average	15	27.8
	Average	34	63.0
	Below Average	5	9.3
Final Grade Point Average (GPA)	Excellent	25	46.3
	Very Good	26	48.1
	Good	3	5.6
Comprehensive Examinations Average (CEA)	Excellent	18	33.3
	Very Good	19	35.2
	Good	15	27.8
	Fair	2	3.7

Legends: GPA.Final Grades [1.00-1.24 = Excellent, 1.25-1.49 = Very Good, 1.50-1.74 = Good, 1.75-2.00 = Fair, 2.01 & above = Poor/Failed] ; **Comprehensive Exam Grades** [1.00-1.49 = Excellent, 1.50-1.99 = Very Good, 2.00-2.49 = Good, 2.50-3.00 = Fair, 3.01 & above = Poor/Failed]; **I.Q.** [4.20-5.00 = Superior, 3.40-4.19 = Above Average, 2.60-3.39 = Average, 1.80-2.59 = Below Average, 1.00-1.79 = Low]

Table 1 presents the graduate student's academic characteristics. The majority (63.0% or 34) of the research subjects [Master of Science in Teaching (MST)] had an average I.Q. The 27.8% or fifteen (15) research subjects had an above-average IQ.and the 9.3% or five (5) on had below-average IQ So, the average is the general IQ level of the MST students. In terms of the research subjects' grade point average (GPA), almost half (48.1% or 26) of the Master of Science in Teaching (MST) students had a very good level of performance. It is followed by excellent (46.3% or 25) and good (5.6% or 3) performance levels. In other words, very good to excellent are the general levels of performance of the MST students in their final grades. Subsequently, a more significant number of MST students (35.2% or 19) have a very good level of performance in their comprehensive examination and followed by excellent level (33.3% or 18) performance. While around 28% or 15 students have good and 4% or two (2) students have fair performances. Thus, the MST students are performing very well in the comprehensive examination. It can be gleaned that the student possesses a considerable level of intelligence that helped them hurdle the rigors of the comprehensive exam. Such success is also stimulated by their long hours of studying, reviewing, and of course, attending the classes.

Table 2. Students' Academic Profiles Predictive Relationship to Success in Comprehensive Examinations

Comprehensive Examination	Mean 1.76	SD 0.347	Pearson r	Adjusted R ²	Standard Coefficient (c=1.948)	t - value	p - value	Descriptive Interpretation
vs. IQ	3.19	0.585	0.065	0.024	0.052	0.371	0.321	Not Significantly Predictor
vs. GPA	1.25	0.153	0.108		0.102	0.725	0.185	Not Significantly Predictor

Legends: Correlation Coefficient: 1.0 = Perfect, .80-.99 = Very Strong, .60-.79 = strong, .40-.59 = Moderate, .20-.39 = Weak, .01-.19 = Very Weak, 0 = No Correlation.

Table 2 shows the predictive relationship between the selected students' academic characteristics and their performance in the comprehensive examination. As seen in the table, there is both a positive weak correlation between the IQ. ($r = .065$) or grade point average [GPA] ($r = .108$) and the comprehensive examination performance with a predictive value of .024. As the IQ or GPA increases or decreases, the comprehensive examination grades increase or decrease with only a 2.4% effect chance. Since the relationship is very weak, both the IQ. ($p = .321$). Furthermore, grade point average [GPA] ($p = .185$) with respective increment values ($m = .052$ and $m = .102$) close to zero are not statistically significant predictors of students' comprehensive examination. In other words, the IQ and GPA are not good predictors of the Master of Science in Teaching (MST) students' success in the comprehensive examinations. So the best way to prepare for the comprehensive examinations is to develop the students' intelligence during class activities.

Some studies noted declining correlations between IQ scores and academic performance with increasing levels of educational attainment.

Hence, it appears that non-ability factors (i.e., personality, self-efficacy, and motivational variables) become more important in distinguishing between better or worse students when the students are preselected by past academic performance or intellectual ability (Chamorro-Premuzic & Furnham, 2006).

CONCLUSION

Generally, the Master of Science in Teaching MST students had a typical intelligence quotient (I.Q) level and above-average academic characteristics. However, their intelligence and performance in their subjects (based GPA) are not a sufficient predictor of their success in the comprehensive examinations since myriad stimuli prodded the students to prepare and pass such examinations before obtaining the degree.

RECOMMENDATIONS

It is recommended that researchers look into other variables that would guarantee success in the comprehensive examination be undertaken and consider this in the teaching lesson design

and teaching strategies to intensify the students' learning strengths to prepare them in passing the comprehensive examinations and their challenges in their respective work.

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PREDICTORS OF SUCCESS IN COMPREHENSIVE EXAMINATION AMONG THE MASTER OF ARTS IN NURSING (MAN) STUDENTS

Maria Estella P. Cabataña

<https://orcid.org/0000-0002-9986-3142>

mastella17@gmail.com

University of Cebu

Cebu City, Philippines

Piluchi Victorina Villegas

piluchi.vic@gmail.com

<https://orcid.org/0000-0001-5630-8854>

University of Cebu

Cebu City, Philippines

Helen C. Estrella

helenc.estrella@gmail.com

University of Cebu Graduate School

Cebu City, Philippines

ABSTRACT

This study determined the predictors of success in comprehensive examinations for the Master in Nursing (MAN) students of the University of Cebu (U.C.) Graduate School, S.Y. 2014-2017. The researchers utilized the data, such as the MAN students' final grades, intelligence quotient (I.Q.), and comprehensive examination ratings. Frequency counts and percentages, simple mean, and multiple linear regression analysis were applied for data analysis. The results show that most of the research subjects had average intelligence quotient (I.Q.) level, very good average final grades for the professional courses, and had very good ratings for the comprehensive examinations. The intelligence quotient (I.Q.) is a predictive factor towards the Master of Arts in Nursing students' ability to attain success in the University of Cebu Graduate School-administered comprehensive examinations.

Keywords-Predictors of academic, intelligence quotient (IQ), Grade Point Average (GPA) success, comprehensive examination, academic profile, correlation, Philippines

INTRODUCTION

Formal education is socially and culturally valuable in the world. It is a most potent weapon. It is even used to change the world (Muskan, 2017). Good school performance indicates future social success (Siqueria & Gurge-Giannetti, 2010). Moreover, the students' performance (academic achievement) plays an essential role in producing the best quality graduates who will become great leaders and workforce for the country, thus responsible for the country's economic and social development (Ali et al., 2009).

Knowledge is acquired by learning. People learn from their day-to-day experiences. When one analyzes any situation, especially students, their creative thinking develops eventually, leading to the overall development of students. In a high-achieving learning environment, teachers involve students in complex problem solving and discovering ideas and issues. Classroom undertakings draw on the students' cultural experiences in practical tasks and offer them viral chances to develop knowledge (Williams, 1994).

It is believed that the country's economy can improve the people's way of life through curriculum development. Moreover, to develop it, curriculum experts or specialists should work hand in hand with lawmakers such as senators and members of Congress, the local government officials, governors, mayors, among others. Likewise, business communities and industries and other economically oriented players in society may be engaged in setting and implementing rules and policies for educational reforms. Hence, curriculum development matters a lot in setting the direction of change in an organization, not only at the micro but also at macro levels. As long as the goals and objectives of curriculum development are apparent in the planner's mind, cutting-edge achievements in various concerns can be realized.

Students from elite schools are expected to perform well because they attend these elite schools and the main reason behind this is that these schools are usually affluent in resources and facilities. Some researchers view that school ownership and the funds available in schools do indeed influence the student's performance.

Going to university is a great way to expand knowledge, meet new people, and enjoy new experiences (UCAS, n.d.). However, some people had obtained a bachelor's diploma who would like to learn more or specialize in a specific field. Hence, they take master's degrees just like the Master of Arts of Nursing (MAN) for those who have obtained a Bachelor of Science in Nursing degree.

Postgraduate degrees are specialist qualifications that help a person become an expert in a particular field of study. They build on the knowledge they have already acquired at the undergraduate level, so they will typically need a bachelor's degree to be accepted. A master's degree is a one or two-year program designed to give an advanced level of knowledge in a specific discipline or professional practice (Studee Ltd., nd.).

The Master of Arts in Nursing (MAN) program is a 36-unit advanced nursing program that prepares professional nurses for leadership and management roles in nursing practice, education, and research with authority to shape the nursing care delivery system of the future in all health settings, both local and global. The program comprises courses from nursing and other related disciplines intended to develop advanced theoretical knowledge in a selected specialization. It utilizes nursing theory and research as a scientific base for nursing practice. Faculty, administrators, and staff provide full support in preparing the graduates of this program to take on leadership roles as administrators, teachers, and consultants themselves in the nursing discipline. The MAN program offers the following areas of specialization, like Medical-Surgical Nursing, Maternal Child Health Nursing, and others (Far Eastern University, n.d.). The MAN graduates belong to Level VII (Post-Baccalaureate) of the Philippine Qualifications Framework (QPF) and are also recognized under the ASEAN Qualifications Reference Framework (AQRF). The Master of Arts in Nursing (MAN) curriculum is passing the comprehensive examination.

A comprehensive examination is an evaluation that measures a student's competency and mastery of concepts in the field of academic discipline. Many graduate programs, especially Ph.D. programs, require students to take comprehensive exams (also known as preliminary exams, general exams, or significant field exams) as part of their program. The purpose of the

comprehensive exam is to ensure the student is knowledgeable enough with his or her area of research to make an original contribution. However, the nature of the exams will vary from school to school and program to program. Assessing a comprehensive exam, written, verbal, or another format indicates that a student is prepared to move into the dissertation phase of the degree (Capella University, 2019).

In higher education, a comprehensive examination (or comprehensive exam or exams), often abbreviated as "comps," is a specific examination that must be completed by graduate students in some disciplines and courses of study and by undergraduate students in some institutions and departments. Unlike final examinations, comprehensive examinations are not linked to any particular course but rather test knowledge across one or more general fields of study. Graduate-level comprehensive examinations are sometimes also known as preliminary examinations ("prelims"), general examinations ("generals"), qualifying examinations ("quals"), or significant field examinations. If these examinations are held orally, they may be known colloquially as "orals." The comps most commonly come after the student has completed the required coursework and before starting on the dissertation; successful passage of the comps is sometimes required for a student to be considered a "Ph.D. candidate."

"In the society of Okiti, Africa, 65% of students who participate in one examination or the other come out with a poor result even after they have taken enough time to prepare for this examination (Oludiran, 2011) adequately. In the educational environment, student assessment helps guide understanding of learning experiences and departmental effectiveness (Tobin & Gebo, 2008).

The researchers, who are professors of the University of Cebu Graduate School, have observed a high incidence of high grades in their taught subjects with high grades, but some of these students failed during comprehensive examinations. This assessment dilemma prodded to conduct of the study assess the factors that determine the success in the comprehensive examination.

FRAMEWORK

This study is anchored on Walberg's (1981) theory of Educational productivity, one of the few empirically tested theories of school learning, and is based on the review and integration of over 3,000 studies (DiPerna & Elliott, 2002). Walberg et al. (1986) identified key variables that affect student outcomes: student ability/prior achievement, motivation, age/developmental level, the quantity of instruction, quality of instruction, classroom climate, home environment, peer group, and exposure to mass media outside of school.

In the current context, the first three variables (ability, motivation, and age) reflect the characteristics of the student. The fourth and fifth variables reflect instruction (quantity and quality), and the final four variables (classroom climate, home environment, peer group, and exposure to media) represent aspects of the psychological environment (DiPerna & Elliott, 2002). Student characteristics are essential for school learning, but they only comprise a portion of the learning equation.

Wang et al. (1993) organized the relevant school learning knowledge base into major construct domains; State & District Governance & Organization, Home & Community Contexts, School Demographics, Culture, Climate, Policies & Practices, Design & Delivery of Curriculum & Instruction, Classroom Practices and Learner Characteristics and attempted to establish the

relative importance of 228 variables in predicting academic domains. Using a variety of methods, the authors concluded that psychological, instructional, and home environment characteristics ("proximal" variables) have a more significant impact on achievement than variables such as state-, district-, or school-level policy and demographics ("distal" variables). More importantly, in the context of the current document, student characteristics (i.e., social, behavioral, motivational, affective, cognitive, metacognitive) were the set of proximal variables with the most significant impact on learner outcomes (DiPerna & Elliott, 2002).

Walberg's model specifies that: Classroom learning is a multiplicative, diminishing-returns function of four essential factors—student ability and motivation, and quality and quantity of instruction—and possibly four supplementary or supportive factors—the social-psychological environment of the classroom, education-stimulating conditions in the home and peer group, and exposure to mass media. Each of the essential factors appears to be necessary but insufficient by itself for classroom learning; that is, all four of these factors appear to require at least a minimum level. It also appears that the essential factors may substitute, compensate, or trade-off for one another in diminishing rates of return: for example, immense quantities of time may be required for a moderate amount of learning to occur if motivation, ability, or quality of instruction is minimal.

John Dewey's Experience and Education theory explained that education and democracy are intimately connected. Dewey further emphasized that good education should have a societal purpose and purpose for the individual student. For Dewey, the long-term matters, but so does the short-term quality of an educational experience. Therefore, educators are responsible for providing students with immediately valuable experiences that better enable the students to contribute to society. Dewey polarizes two extremes in education -traditional and progressive education. Dewey criticizes traditional education for lacking in the holistic understanding of students and designing curricula overly focused on content rather than content and process, which is judged by its contribution to the well-being of individuals and society. On the other hand, progressive education, he argues, is too reactionary and takes an accessible approach without really knowing how or why freedom can be most helpful in education. Freedom for the sake of freedom is a weak philosophy of education. Dewey argues that we must move beyond this paradigm war, and to do that, we need a theory of experience (Dewey, 1997).

Thus, Dewey argued that educators must first understand the nature of the human experience. Dewey's theory is that experience arises from the interaction of two principles: continuity and interaction. Continuity is that each experience a person has will influence his/her future, for better or worse. Interaction refers to the situational influence on one's experience. In other words, one's present experience is a function of the interaction between one's past experiences and the present situation. It is essential to understand that no experience has pre-ordained value for Dewey. Thus, a rewarding experience for one person could be a detrimental experience for another. The value of the experience is judged by the effect that experience has on the individual's present future and the extent to which the individual can contribute to society.

The Social learning theories of Lev Vygotsky (1962) also helped to understand how people learn in social contexts (learn from each other) and informs us on how we, as teachers, construct active learning communities. Lev Vygotsky first stated that people learned through interactions and communications with others and examined how social environments influence learning. He suggested that learning occurs through students' interactions with their peers, teachers, and other experts. Consequently, teachers can create a learning environment that maximizes learners' ability to interact through discussion, collaboration, and feedback. Moreover, Vygotsky argued

that culture is the primary determining factor for knowledge construction. A person learns through this cultural lens by interacting with others and following our culture's rules, skills, and abilities.

Language is the primary tool that promotes thinking, develops reasoning, and supports cultural activities like reading and writing" As a result, instructional strategies that promote literacy across the curriculum play a significant role in knowledge construction as well as the combination of whole-class leadership, individual and group coaching, and independent learning. Moreover, teachers need to allow students to have a managed discussion about their learning. The discussion has a purpose with substantive comments that build off each other, and there is a meaningful exchange between students that results in questions that promote more profound understanding. Discussion-based classroom using Socratic dialogue where the instructor manages the discourse can lead each student to feel like their contributions are valued, resulting in increased student motivation. The teacher, or local topic expert, plays the critical role of facilitator, creating the environment where directed and guided interactions can occur. Many other educational theorists adopted Vygotsky's social process ideas and proposed strategies that foster more bottomless knowledge construction, facilitate Socratic student discussions, and build active learning communities through small group-based instruction (Vygotsky, 1978).

In essence, learning always occurs and cannot be separated from a social context. Consequently, instructional strategies that promote the distribution of expert knowledge where students collaboratively work together to conduct research share their results and perform or produce a final project help create a collaborative community of learners. Knowledge construction occurs within Vygotsky's (1962) social context that involves student-student and expert-student collaboration on real-world problems or tasks that build on each person's language, skills, and experience shaped by each individual's culture (Neff, n.d.).

The Social Learning Theory of Albert Bandura (1986) mentions that an individual can learn from watching how other people behave or react. The observed behaviors, attitudes, or emotions guide the person's actions later. Bandura outlined four conditions or steps for observational learning: attention, retention, reproduction, and motivation. Paying attention is crucial to learning and absorbing; therefore, attentiveness must be assured before learning occurs. Attention and learning are directly influenced by how attractive the model or behavior is to the observer. The intention is to engage all the observer's senses or catch his full attention. Retention means storing information about what has just taken place. Sometimes, the poor extent of memory retention requires that the behavior be modeled again. A few intellectual subprocesses that aid in retention are symbolic coding, organization, mental rehearsal, and rehash. After successfully paying attention and retaining the information, a person demonstrates the behavior in the reproduction stage. Repeated demonstration leads to improvement by utilizing feedback and past mistakes. Corrects and modifications to suit the model may be undertaken. Eventually, mastery of the behavior is anticipated. Finally, motivation in the form of external or internal reward, incentive, or even punishment is the final stage. Either outside reinforcement or self-reinforcement will result in proper repetition of the behavior.

Student academic performance measurement has received considerable attention in previous research, it is challenging aspects of academic literature, and science student performance are affected due to social, psychological, economic, environmental, and personal factors. These factors strongly influence student performance, but these factors vary from person to person and country to country (Mustaq & Khan, 2012). Poor school performance (PSP) can be defined as a school achievement below the expected for a given age, cognitive skills, and

schooling. PSP should be seen as a symptom related to many etiologies. It is noteworthy that regardless of the etiology, PSP results in emotional distress (low self-esteem, demotivation) and family concern, in addition to repercussions in individual, family, educational, and social realms (Siqueria & Gurge-Giannetti, 2010).

The Final grade average (FGA) or Grade Point Average (GPA) is a number that indicates how well or how high you scored in your courses on average. It is meant to score (usually on a scale between 1 and 4) during the studies and shows whether their grades have been high or low overall in the classes. This number is then used to assess whether a person meets the standards and expectations set by the degree program or university. Throughout the university education, the GPA is the only metric or calculation showing how good of a student, and whether a student has been doing well during the degree program. Though he or she will obviously know oneself whether he or she passed and excelled in the courses, the GPA gives a broader indication of the overall grades and scores. Besides determining eligibility for admission, all of these factors can also be used to determine applicants' eligibility for college scholarships. Depending on the type of scholarship, applicants may be required to have earned a minimum high school GPA, for example, a 3.0. Students may also be required to maintain a minimum college GPA to retain their scholarships. Though colleges almost universally use high school GPAs to measure students' achievement and predict their academic success, experts disagree on how closely high school GPAs correlate to college GPAs (Hebel, 2007; Reese & Dunn, 2008).

Mattson (2007), for instance, concludes that students' high school GPAs are the single pre-college variable that most accurately predicts their college GPAs. Another study finds that high school GPAs have the highest correlation with college freshman GPAs and are the strongest predictor of moderate first-year achievement, exceeding the predictability of ACT scores (Noble & Sawyer, 2004). Research also shows that, although the academic ability is the most significant explanatory variable in studies on student learning, high school GPAs are also a significant control for academic aptitude and college grades (Grove et al., 2006). Others, however, contend that predictive validity is improved by supplementing a student's GPA with other information concerning his or her pre-college achievements. Factoring in college entrance exam scores in addition to high school GPA, for instance, increases the predictability of overall college freshman GPA to a small but significant amount for all gender and ethnic subgroups (Cowen & Fiori, 1991). Likewise, one study found a direct link between high school students' mathematics coursework and their preparation for postsecondary education (Eno et al., 1998).

Students' academic gain and learning performance are affected by numerous factors, including gender, age, teaching faculty, students schooling, father/guardian social, economic status, residential area of students, medium of instructions in schools, tuition trend, daily study hour and accommodation as hostels or day scholar. Many researchers conducted detailed studies about the factors contributing to student performance at different study levels. Considine and Zappala (2002) noticed that parents' income or social status positively affects the student test score in the examination.

According to Minnesota (2007), higher education performance depends upon the academic performance of graduate students. Bratti and Staffolani (2002) observed that the measurement of students' previous educational outcomes is the most critical indicator of students' future achievement. This means that the higher the previous appearance, the better the student's academic performance in future endeavors. Many studies have been conducted on student achievement, and these studies identify and analyze the number of factors that affect the student's academic performance at school, college, and even at the university level. Their findings identify

students' effort, previous schooling, parents' educational background, family income, self-motivation of students, student age, learning preferences, and entry qualification of students as important factors that affect students' academic performance in different settings. The utility of these studies lies in need to undertake corrective measures that improve the academic performance of graduate students.

Reddy and Talcott (2006) disagreed with assumptions that future academic gains are resolute by preceding performance. Their research on the relationship between previous academic performance and subsequent achievement at the university level found that students learning or studying at the graduate level and the score secured did not predict any academic achievement at the university level. They also cited Pearson and Johnson (1978), who observed the whole grade association of only 0.28 between graduate-level marks and university degree achievement.

It is also assumed that children learning outcomes and educational performance are strongly affected by the standard and type of educational institution in which students get their education. The school's educational environment sets the parameters of students' learning outcomes. Considine and Zappala (2002) quoted Sparkles (1999) owed that a school's environment and teachers' expectations from their students also strongly influence student performance. Most of the teachers working in poor schools or schools having run short of basic facilities often have low performance expectations from their students, and when students know that their teachers have low-performance expectations, it leads to poor performance by the students.

Kwesiga (2002) approved that performance of the students is also influenced by the school in which they studied, but he also said that number of facilities a school offers usually determines the quality of the school, which in turn affects the performance and accomplishment of its students. A curriculum is considered the "heart" of any learning institution, which means that schools or universities cannot exist without a curriculum. With its importance in formal education, the curriculum has become a dynamic process due to the changes that occur in our society. Therefore, in its broadest sense, curriculum refers to the "total learning experiences of individuals not only in school but society as well" (Bilbao et al., 2008).

Crosnoe and Elder (2004) noticed that school ownership, provision of facilities, and availability of resources in school is the essential structural component of the school. Private schools, due to the better funding, small sizes, serious ownership, motivated faculty, and access to resources such as computers, perform better than public schools. These additional funding resources and facilities found in private schools enhance their students' academic performance and educational attainment.

The GPA is the only metric or calculation throughout university education showing how good a student is and whether she/he has been doing well during the degree program. Though she/he will obviously know whether they passed and excelled in their courses, their GPA gives a broader indication of their overall grades and scores. During Bachelor's or Master's degree program, applicants will be asked to provide their GPA. Here are a few examples: applying for a scholarship, joining an organization or club, doing extracurricular activities, and applying for a graduate or post-graduate program. So, in many ways, GPA is the key used to unlock other exciting things during one's study. When organizations want to know what kind of student, whether hard-working, ambitious, or slacker and who does not excel in one's coursework, they rely on the GPA. Organizations, scholarship committees, clubs, and universities want high-achieving, hard-working students, and so they want someone with a high GPA (Potter, 2007).

Colleges and universities typically require students to meet or exceed a minimum GPA standard, though these standards can vary from school to school (Gayles, 2006). For example, some schools may consider an applicant to have demonstrated sufficient academic aptitude by earning a C average or 2.0 GPA on a four-point scale (Eno, McLaughlin, Brozovsky, & Sheldon, 1998). On the other hand, more competitive schools may require applicants to have earned a 3.5 GPA, or A/B average. Admissions officers may additionally consider applicants' class rankings (National Research Council, 1986). GPAs are supplemented with standardized test scores, too. Like GPAs, most schools require their applicants to meet or exceed minimum SAT or ACT scores and may also take into account any advanced placement test scores (Gayles, 2006).

Meeting these minimum requirements does not guarantee admission, however. Students are also expected to demonstrate their seriousness and academic aptitude by completing rigorous high school curricula, including college preparatory courses and subject requirements (Eno et., 1998).

Finally, admissions officers realize that college success is about more than just grades. High school students involved in athletics, student government, arts programs, or volunteer activities demonstrate that they possess personal qualities that will make them engaged and dynamic college students. Correspondingly, students involved in extracurricular activities tend to have higher GPAs and higher academic rankings. Admissions officers, therefore, frequently look at extracurricular activities and any non-academic honors, like service and leadership awards, to determine applicants' eligibility for admission (National Research Council, 1986).

Besides determining eligibility for admission, all of these factors can also be used to determine applicants' eligibility for college scholarships. Depending on the type of scholarship, applicants may be required to have earned a minimum high school GPA, for example, a 3.0. Students may also be required to maintain a minimum college GPA to retain their scholarships. Though colleges almost universally use high school GPAs to measure students' achievement and predict their academic success, experts disagree on how closely high school GPAs correlate to college GPAs (Hebel, 2007; Reese & Dunn, 2008).

A comprehensive examination is a test that covers an extensive array of material. Such a test aims to assess the knowledge and capabilities of a student before granting them a graduate degree. What is included in the comprehensive exam varies depending on the type of degree, and passing the exam allows the student to continue onto higher levels of education. The format for a comprehensive exam varies wildly, depending on the school. Some even have to take multiple types of exams. They are often given in the form of academic papers but can also be given as a formal exam or a traditional supervised written exam that can be broken up over a few days. In some instances, a comprehensive exam is merely a review of the academic portfolio. There are often given in the form of an academic paper but can also be given as a formal oral exam or a traditional supervised written exam that can be broken up over a few days. In some instances, a comprehensive exam is merely a review of the academic portfolio. Although the requirements for a comprehensive exam vary between schools and programs, a minimum Grade Point Average (GPA) is generally required prior to taking this exam. Students who take a comprehensive exam must have completed all of the coursework, and if relevant to their field of study, they may need to have completed all of the coursework, and if relevant to their field of study prior to taking the exam. Other requirements include a request form for the comprehensive exam that must be filled out and submitted. The comprehensive exams aim to ensure that students understand the main ideas of their field and research focus. These exams are used as a tool to make sure that students do not begin their research without being fully prepared (University of the People, n.d.).

Therefore, these exams tend to include questions about research methodologies and how to apply them in specific fields of study. Comprehensive exams also entail a variety of concepts and theories related to the subject of the study, both for adding to the already existing knowledge and how to solve problems.

However, a comprehensive examination should be the student's opportunity to reflect on what she or he has learned to demonstrate how her/his knowledge and skills will contribute to her or his research and practice. Steen (1999) reported that having obtained unsatisfactory results in comprehensive exams, many changes in departmental offerings and requirements were made. The form and general requirements for the comprehensive exam vary according to the faculty or department; degree sought, university, and country, but typically tests knowledge of the student's subject area and two or more related areas and may be used to determine a candidate's eligibility to continue his or her course of study. At the graduate level, the purpose of the comprehensive exam is to ensure the student is familiar enough with her area of research to make original contributions. There is no standard definition for what such examinations entail, with some universities having almost no exam, while the process is quite rigorous at other universities. The exams thus take several forms, including an informal meeting of just a few hours, a critical review of one's academic portfolio, the submission of an academic paper which may take several hours or months to write, or a series of proctored exams taking anywhere from a few hours to two days. In the light of these related literatures and personal experiences in the teaching arena, the researchers are inspired to pursue this study in the hope that gaps can be bridged to improve and achieve the students' learning outcomes by enhancing the different predictors that determine the success of the comprehensive examinations of graduate school students in the Master in Nursing (MAN) program.

OBJECTIVES OF THE STUDY

This study determined the predictors of success in comprehensive examinations for the Master in Nursing (MAN) students of the University of Cebu (UC) Graduate School, S.Y. 2014-2017. The findings served as bases for a test construction enhancement plan. Specifically, this study determined the significant relationship between the academic profile of the students as to intelligent quotient (IQ), Grade Point Average (GPA), and average comprehensive examination rating (ACE).

METHODOLOGY

This study utilized descriptive correlation research. Correlational research design investigates relationships between variables without the researcher controlling or manipulating any of them. A correlation reflects the relationship's strength and/or direction between two (or more) variables. The direction of a correlation can be either positive or negative (Bhandari, 2022).

The study was conducted at the University of Cebu Graduate School, Cebu City, Cebu, Philippines. It is an educational institution founded in 1964 and offers undergraduate and postgraduate courses in the fields of Business and Accountancy, Computer Studies, Office Administration, Criminal Justice, Engineering, Education, Law, Maritime programs, Tourism,

Arts and Sciences, Nursing, and Medicine. The institution also offers early education programs for Nursery, a basic education program for Kindergarten, and junior and Senior High School. As of 2019, it had more than 60,000 students. The study subjects were the Master of Arts in Nursing (MAN) students for the school year, 2014-2017.

The researchers used secondary data sources, such as Grade Point Average (GPA) from the Registrar's Office, entrance examination results from the Guidance office, and comprehensive exam rating from the Graduate School Office. There were twenty two (22) research subjects in this investigation. Permission to conduct the study was obtained from the Dean of Graduate School. Frequency count and percentage were used to summarize the demographic profile of the subjects. Simple Mean was used to summarize the level of performance in the academic variables, and; multiple linear regression analysis was utilized to determine the predictive value for each factor towards students' success in the comprehensive examination.

RESULTS AND DISCUSSION

This section presents the data of the subjects' academic profiles in terms of IQ, average final grades for the professional subjects, and the comprehensive examination ratings.

Table 1. Graduate Students' Academic Profiles (n=22)

Academic Profiles		Frequency (f)	Percentage (%)
Intelligent Quotient (IQ)	Above Average	1	4.50
	Average	18	81.80
	Below Average	3	13.60
	Excellent	3	13.60
Final Grades Average (GPA)	Very Good	15	68.20
	Good	4	18.20
	Excellent	1	4.50
	Very Good	12	54.50
Comprehensive Examinations Average (CEA)	Good	2	9.10
	Fair	4	18.20
	Poor/Failed	3	13.60

Legends: Final Grades [1.00-1.24 = Excellent, 1.25-1.49 = Very Good, 1.50-2.00 = Fair, 2.01 & above = Poor/Failed]; **Comprehensive Exam Grades** [1.00-1.49 = Excellent, 1.50-1.99 = Very Good, 2.00-2.49 = Good, 2.50-3.00 = Fair; 3.01 & above = Poor/Failed]; **L.Q.** [4.20-5.00 = Above Average, 2.60-3.39 = Average, 1.80-2.59 = Below Average, 1.00-1.79 = Low]

Table 1 presents the Master of Arts in Nursing (MAN) students' academic profiles. More than three-fourths (18, 81.8%) of them had an average intelligence quotient (IQ) level. In contrast, only one (1) or 4.5% had above average IQ level. These results mean that the students who took the MAN) program possessed a typical intelligence level, which is necessary for them to comprehend the theories and concepts for any specialized field in the nursing profession.

In terms of the average final grades or Grade Point Average (GPA) of the Master of Arts in Nursing subjects, the majority (15, 68.2%) had very good performance of the major subjects that they took, while there was only one (4.50%) who attained an excellent academic performance. These results denote that the research subjects had high performance in the examinations, assignments, and required coursework or outputs.

As one of the terminal requirements in getting the Master of Arts in Nursing (MAN) degree, more than half (12, 54.5%) of them had a very good performance level in the

comprehensive examinations. In contrast, two (2) MAN students obtained good performance ratings in the said exam, while other research subjects had either average good or ratings. These results mean that although the majority of the Master of Arts in Nursing (MAN) students obtained very good marks in the comprehensive examination, there were few (3,13.60%) who would flunk in the abovementioned examinations. Although, students taking the Master of Arts in Nursing (MAN) who failed in the comprehensive examination were rare since most of them had undergone rigorous nursing education training and passed the Philippine Nursing Licensure Examinations (PNLE).

Table 2 below describes the predictive correlation of the students' academic profile to success in comprehensive examinations.

Table 2. Students' Academic Profiles Significant Relationship in Comprehensive Examinations Ratings

Comprehensive Examination	Mean	SD	Pearson r	Adjusted R ²	Standard Coefficient (c=1.948)	t-value	p-value	Descriptive Interpretation
Vs. IQ	2.91	0.426	0.461		0.445	2.299	0.033	Significantly Predictor
Vs. GPA	1.36	0.123	0.306	0.216	0.280	1.444	0.165	Not Significantly Predictor

Legends: Correlation Coefficient: 1.0 = Perfect, 0.80-.99 = Very Strong, .60-.79 = Strong, .40-.59 = Moderate, .20-.39 = Weak, .01-.19 = Very Weak, 0 = No Correlation

Table 2 presents the results on the test of significant relationships between the Master of Arts in Nursing (MAN) students' academic profiles and their comprehensive examination result. It can be gleaned from the results that there is a moderate positive relationship ($r = .461$) between the Master of Arts in Nursing (MAN) students' intelligence quotient (IQ) level and their rating in the comprehensive examination based on the predictive value of 0.216.

These results mean that as the students' IQ gets higher or lower, the comprehensive examination ratings get higher or lower with a 21.60% effect chance. These results mean that the intelligence quotient (IQ) with the p-value of .033 and an increment value of .445 that is around far half from zero, is a statistically significant predictor of the MAN students' success in the comprehensive examination. In other words, the intelligence quotient (IQ) contributes to the research subjects' performance in the abovementioned examination.

On the other hand, there is also a positive or direct weak relationship ($r = .306$) between the research subjects' comprehensive examination achievement and their average final grade or Grade Point Average (GPA). Despite this, the academic performance as indicated by the p-value or 0.165) with an increment value of .0280, which is a bit closer to zero, is not a statistical predictor for comprehensive examination ratings. These results further denote that the research subjects' Grade Point Average (GPA) directly influences hurdling the difficulties in taking the comprehensive examination. Thus, one cannot only rely on his or her final grades to predict success in the comprehensive examination.

CONCLUSIONS

Students' intelligence quotient (IQ) plays a vital role in the Master of Arts in Nursing in students' success in taking the comprehensive examinations as one of the final requirements in obtaining a graduate academic degree. It can be inferred that it is a crucial element in the graduate students' quests to perform well during the comprehensive examinations. Moreover, the average final grade of Grade Point Average (GPA) for the professional subjects is also another contributory factor in successfully passing the terminal degree requirement.

RECOMMENDATIONS

Based on the findings of the study, the researchers recommend that the administrators of the Graduate School and the Master of Arts in Nursing (MAN) program shall revisit the admission requirements for those who apply to enroll in the same program, such as requiring at least average intelligence quotient (IQ). Also, in cooperation with the faculty members, the Graduate School Office shall maintain regular monitoring and advisors (tutoring) to those Master of Arts in Nursing (MAN) who possessed lower IQ. Further, there shall be consultations and brainstorming between student representatives and professors about how they can improve the teaching-learning process.

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FINDING CONNECTION BETWEEN THE CRIMINAL JUSTICE GRADUATE STUDENTS' INTELLIGENCE AND ACADEMIC SUCCESS

Dodelon F. Sabijon

<https://orcid.org/0000-0002-1063-4272>

University of Cebu
Cebu City, Philippines

Paulino V. Pioquinto

<https://orcid.org/0000-0002-1009-6371>

University of Cebu
Cebu City, Philippines

Elmira O. Negro

<https://orcid.org/0000-0001-8917-5998>

University of Cebu
Cebu City, Philippines

ABSTRACT

This study was conducted to determine the correlation among the Master of Science in Criminal Justice (MSCJ) students' intelligence quotients (IQ), differential aptitude test (DAT), average comprehensive examination (ACE), and average final grade (AFG) with the end view of proposing for an intervention program. This correlational research utilized secondary data for the research subject's information and applied documentary analysis. It was conducted at the University of Cebu Graduate School, where the data of the Master of Science in Criminal Justice (MSCJ) students were obtained. There were forty-five (45) (MSCJ) students whose records were analyzed. The Master of Science in Criminal Justice students had average intelligence and mediocre academic performance. The Master of Science in Criminal Justice students had an average intelligence quotient, average Differential Aptitude Test (DAT) mark, very good final ratings, but only fair ratings in the comprehensive examinations. There is also no significant relationship between the research subjects' comprehensive examination (ACE) results and the research subjects' profiles. The plethora of research has confirmed that students' performance in the comprehensive examination and the class is not influenced by IQ level or Differential Aptitude (DAT) results. However, various factors, including personal traits, school environment, peer groups, and others, either motivated or demotivated them towards academic success. It was recommended that an appropriate intervention scheme focusing on the teaching and learning strategies should be embedded in the classroom instruction to maximize the students' learning potentials on the competitive skills that the MSCJ program hopes to provide to the students.

Keywords-Criminal Justice, Correlation on IQ and DAT with Examination Results and Grades, University of Cebu, Cebu City, Philippines,

INTRODUCTION

The very aim of the graduate program is to prepare the students for the more challenging demands of their work. Studies reveal a strong connection between the competencies learned in the graduate programs and the job performance of those who took the master's program (Sabijon & Pioquinto, 2019). Thus, the quality of education and the improvement that it hopes to achieve is one significant matter of concern to all higher educational institutions. Many factors served as the impetus of the master's degree students' performance in the class or in the courses they enrolled in each semester. A plethora of research provides several suggestions to determine the quality indicators related to students' performance with the end in view of developing tools to predict the extent that students are capable of reaching a good academic performance and which are considered vital to the success of their academic endeavors. These researches suggested personal attributes, socio-economic and cultural background, and educational aptitudes of these students as factors for their performance.

The graduate program of the University of Cebu, particularly the Master of Science in Criminal Justice program, was conceived to open the door of opportunities to those graduates in undergraduate courses of criminology and criminal justice education in order for them to get suitable employment and promotions in their jobs. Being the heart of the country in terms of location, Cebu is favorably vested with the right to offer the master's degree program. This graduate program would prepare the students for managerial positions or employment promotion qualifications. There is a need to look into the potentials and possible fit-falls of the students to meaningfully support them as they take the challenges of the educational endeavor (Sabijon et al., 2016).

However, there were many instances that the Master of Science in Criminal Justice students experienced difficulties in their examination, complying with the course requirements, and even passing the comprehensive examinations. Sabijon et al. (2016) posit that the students are working professionals; their performance shows disparities because some students perform well, while others lackluster performance. It is admitted that somehow some factors may contribute to this. However, there is also the possibility that some intrinsic abilities such as their Intelligence Quotient their different aptitudes test results greatly influence some extrinsic abilities such as their performance in class or their comprehensive examination.

While there was a correlation study on intelligence quotient, differential aptitudes, and students' grades in comprehensive examinations conducted in prior years, it was not enough to extract good evidence to establish a significant connection between students' performance in examinations. It is only informative that somehow these intrinsic and extrinsic abilities correlate with others. Thus, this study hopes to validate or invalidate the previous study's findings. The purpose of this study is to assess closely the correlation between or among the standard variables utilized by the University of Cebu Graduate School in order to extract data helpful in achieving the objectives of this research with the end in view of creating an avenue to establish a viable intervention program or enhancement measures to raise the academic performance of students. As faculty members of the Master of Science in Criminal Justice program, the researchers are more than eager to conduct this study to develop a proposed action program of measures of intervention or improved program.

FRAMEWORK

This study is anchored on Susan Harter's Competence Motivation Theory and Albert Bandura's Self-Efficacy Theory. Competence motivation theory states that people, in particular, are motivated by a perception of mastery in these areas and, in turn, perceived mastery will stimulate them in continued effort investment in an attempt to improve their skills or competency beliefs, pleasant emotional responses, enhanced intrinsic motivation and involvement (Bortoli et al., 2011). This theory proposed that an individual's innate desire to demonstrate competence is exhibited in their tendency to engage in mastery attempts. Central to this model are constructs of perceived competence, perception of control, and effects (Wong & Bridges, 1995).

In this case of a person taking a post-graduate degree while working, both one's competence and perceived abilities would work as their motivation to hurdle the trials and become successful in obtaining the degree.

Self-efficacy theory expounds on "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations." In other words, self-efficacy is a person's belief in his or her ability to succeed in a particular situation.

Bandura (1993) described these beliefs as determinants of how people think, behave, perform and feel. Self-efficacy has become such an important topic among social scientists and educators because self-efficacy can impact everything from psychological states to behavior to motivation to performance. Virtually everyone can identify goals they want to accomplish, things they would like to change, and things they would like to achieve. However, most people also realize that putting these plans into action is not simple. Bandura and others have found that an individual's self-efficacy plays a significant role in approaching goals, tasks, and challenges. People with a strong sense of self-efficacy view challenging problems as tasks to be mastered, develop a more profound interest in the activities they participate in, form a stronger sense of commitment to their interests and activities, recover quickly from setbacks and disappointments.

On the other side, people with a weak sense of self-efficacy avoid challenging tasks, believe that complex tasks and situations are beyond their capabilities, focus on personal failings and adverse outcomes, quickly lose confidence in personal abilities. How does self-efficacy develop? These beliefs begin to form in early childhood as children deal with various experiences, tasks, and situations. However, the growth of self-efficacy does not end during youth but continues to evolve throughout life as people acquire new skills, experiences, and understanding.

According to Bandura, there are four primary sources of self-efficacy. The first one is the mastery experiences, which is the most effective way of developing a strong sense of efficacy is through mastery experiences; performing a task successfully strengthens the sense of self-efficacy. However, failing to deal with a task or challenge adequately can weaken self-efficacy. The second is social modeling, which entails witnessing other people completing a task is another important source of self-efficacy. According to Bandura, seeing people similar to oneself succeed by sustained effort raises observers' beliefs that they too possess the capabilities to master comparable activities to succeed; (3) 3. Social Persuasion. Bandura also asserted that people could be persuaded to believe that they have the skills and capabilities to succeed. Consider when someone said something positive and encouraging that helped achieve a goal. Getting verbal encouragement from others helps people overcome self-doubt and instead focus on giving their best effort to the task at hand; (4) Psychological Responses. Our responses and emotional reactions to situations also play an essential role in self-efficacy.

More recently, Zins et al. (2004) demonstrated the importance of the domains of motivational orientations, self-regulated learning strategies, and social/interpersonal abilities in facilitating academic performance. They reported, based on the large-scale implementation of a Social-Emotional Learning (SEL) program, that students who became more self-aware and confident regarding their learning abilities, who were more motivated, who set learning goals, and who were organized in their approach to work (self-regulated learning) performed better in school. Research linking social, emotional, and academic factors is sufficiently strong to advance the new term social, emotional, and academic learning (SEAL). A central challenge for researchers, educators, and policymakers is strengthening this connection through coordinated multiyear programming (Greenberg et al., 2003; Zins et al., 2004).

Walberg and associates' conclusions resonate with findings from other fields. For example, the "resilience" literature (Garmezy, 1993) grew from the observation that despite living in disadvantaged and risky environments, confident children overcame and attained high levels of achievement, motivation, and performance (Gutman et al., 2002). Wach's (2000) review of biological, social, and psychological factors suggested that no single factor could explain "how" and "why" these resilient children had been *inoculated* from the deleterious effects of their day-to-day environments. A variety of promotive (direct) and protective (interactive) variables were suggested, which included, aside from cognitive abilities, such conative characteristics as study habits, social abilities, and the absence of behavior problems (Guttman et al., 2003).

Haertel et al.'s (1983) review of theories, multiple quantitative syntheses of classroom research, and secondary data analyses of extensive-scale national surveys (Reynolds & Walberg, 1992) generally support Walberg's global model of educational productivity. Walberg's model specifies that: Classroom learning is a multiplicative, diminishing-returns function of four essential factors—student ability and motivation, and quality and quantity of instruction—and possibly four supplementary or supportive factors—the social-psychological environment of the classroom, education-stimulating conditions in the home and peer group, and exposure to mass media. Each of the essential factors appears to be necessary but insufficient by itself for classroom learning; that is, all four of these factors appear to require at least a minimum level. It also appears that the essential factors may substitute, compensate, or atrade-off for one another in diminishing rates of return: for example, immense quantities of time may be required for a moderate amount of learning to occur if motivation, ability, or quality of instruction is minimal (Haertel et al., 1983).

OBJECTIVES OF THE STUDY

This study assessed the intelligent quotient (IQ), differential aptitude test (DAT) results, average final grades (AFG), an average comprehensive examination (ACE) results of Master of Science in Criminal Justice (MSCJ) students, University of Cebu, Main Campus, SY 2018-2019. The findings served as the basis for a proposed action plan. Specifically, the study looked into the profile of the subjects in terms of Intelligent Quotient (IQ); Differential Aptitude Test (DAT) result; Average Final Grades (AFG); level of performance of the subjects in the comprehensive examination; the significance of the relationship between the subjects' profile and level of performance in the comprehensive examination. Based on the findings, an action plan was being proposed.

METHODOLOGY

This study employed a quantitative method of research utilizing data mining as the primary data gathering tool where documents relating to Master of Science in Criminal Justice (MSCJ) students' IQ and Differential Aptitude (DAT) results, average final grades (AFG), an average Comprehensive Examination (ACE) results which were sourced and obtained from the school records and were processed, analyzed and used as the basis in coming up with findings and recommendations. The study was conducted in the University of Cebu Main Campus, situated in the old business center of Cebu along Sanciango St, Cebu City. The school has a Graduate School that offers a Master of Science in Criminal Justice specializing in Criminology program. The school has catered to students from various cities, provinces, and regions in Visayas and Mindanao areas and other nearby regions in the last fifteen years. There were only forty-five (45) Master of Science in Criminal Justice (MSCJ) students whose records were covered in the study. These records consist of the intelligence quotient (IQ) levels, differential aptitude test (DAT) results, average final grades (AFG), an average comprehensive examination (ACE) results. Following protocols, these records were handled judiciously, and names and identities were not divulged in consideration of the Data Privacy law. After the approval of this research proposal, the researchers, in consultation with University Administration, requested copies of the documents mentioned above from appropriate departments in the school. Frequency count, percent, and Chi-square test of independence were used for data analysis.

RESULTS AND DISCUSSION

Table 1 shows the data pertaining to the intelligence quotient (IQ) of the Master of Science in Criminal Justice students.

Table 1. Intelligent Quotient (IQ) Level of the Subjects (n=45)

IQ Level/Categories	Frequency (f)	Percentage (%)
Superior	0	0
Above Average	3	6.67
Average	32	71.11
Below Average	9	20.00
Low	1	2.22
Total	45	100.00

The majority of the subjects, comprising 71.11 percent, have an average IQ level, while the least number comprising 2.22 percent has a Low IQ level. It is noteworthy that more than two-thirds of the subjects have average IQ levels, but only 6.67 had above-average IQ.

Comparatively, the results of this study seemed to confirm the results of the previous study (Sabijon et al., 2016) still involving MSCJ students where two-thirds of the subjects (66.67) possessed an Average IQ level. On the below-average IQ level, there is also concordance with the previous study in which Sabijon et al. (2016) found that it was disturbing to know that 25.49 percent and 5.88 percent are Below Average and Low in their IQ Level.

In the study by Sabijon et al. (2016), a quite big chunk of the MSCJ student population had below average and low average IQ levels, which is alarming in the sense that it was expected that

students who enrolled in graduate school should have possessed, at the minimum, average IQ level considering that MSCJ program requires the students to possess academic potentials and critical thinking skills which are gauged during class discussions, researches, written and oral presentations.

Table 2. Differential Aptitude Test (DAT) of MSCJ Students (n=45)

Categories	Verbal		Numerical		Abstract Reasoning		Language	
	f	%	f	%	f	%	f	%
Above-average	2	4.44	2	4.44	2	4.44	0	0
Average	20	44.45	25	55.56	32	71.11	23	51.11
Below Average	23	51.11	18	40.00	11	24.25	22	48.89

The data unravel that more than half (23 out of forty-five (45)) or 51.11 percent of the research subjects had a below-average rating in the Differential Aptitude Test (DAT), while the remaining 44.45% of research subjects had an average DAT rating.

The previous study of Sabijon and Pioquinto (2016) has similar results on the verbal abilities of the research subjects wherein the majority or 62.75 percent of the research subjects had the below-average verbal aptitude, while only nineteen 19 out fifty-one (51) (37.25 percent) exhibited average verbal aptitude. The two studies share concordance with the results on the verbal aptitude of Master Science in Criminal Justice (MSCJ) students. It is now confirmed that MSCJ students have not excelled in verbal ability but may have the potential to harness their verbal skills if the teachers' lesson design would give them the chance to express their ideas and thoughts in the class verbally.

The findings on the verbal abilities of MSCJ students have a connection with their language aptitude, which clearly shows that almost half of the MSCJ students (22 out of 45) or 48.89 percent, had the below-average aptitude, while 51.11 percent (23 out of 45) had the average aptitude. This fact occurs since the subjects' undergraduate course, Bachelor of Science in Criminology, does not require intensive skills in the Verbal area and English language. The orientations and learning experiences of the subjects in their undergraduate studies may have been limited and did not contribute much to enhancing their abilities in verbal aptitude and language skills. The subjects may also lack the desire or interest during their studies to get into activities that influence their verbal skills and language development (Sabijon and Pioquinto, 2016). There must be a program that must be done to expose more the students to verbal and language activities in and out of the classroom.

A good chunk (18 out of 45) or 40 percent of the research subjects had below-average numerical abilities. This must be admitted since their undergraduate course of Bachelor of Science in Criminology does not address the numerical aspect of students. However, it is still consoling that more than half (25 out of 45) or 55.56 percent exhibited average numerical abilities. There is only a slight difference between the previous and present studies.

The majority of the subjects, 32 out of 45) or 71.11 percent, possessed average aptitude skills. This result confirms the results of the previous study of Sabijon and Pioquinto (2016), where the Master of Science in Criminal Justice (MSCJ) students had high abstract reasoning abilities. This result relates to their experiences during undergraduate studies covered activities that exposed them to situational analysis and understanding of the different events with less verbal exposure. Many students (11 out of 45) were still within the threshold of below-average

abstract reasoning abilities. In this respect, the teaching style and the lesson design of the professor should be coherent with the student's learning style to maximize learning.

Table 3. Average Final Grade (AFG) of the Subjects (n=45)

Grade Ranges	Description	Average Final Grade	
		Frequency (f)	Percentage (%)
1.00 – 1.19	Excellent	7	15.56
1.20 – 1.39	Very Good	26	57.77
1.40 – 1.59	Good	12	26.66
1.60 – 1.99	Fair	0	0
2.00 -3.00	Poor	0	0

In terms of academic performance, it was found out that twenty-six (26) or 57.77 percent of the research subjects had very good grade ratings, while seven (7) got excellent ratings (1.00 - 1.19). Twelve (12) out of 45 got good ratings (1.40 -1.59). This result is related to the results of the previous study where the majority of the subjects (25 out of 51) had very good grades academic performance, and seven (7) or 13.73 percent while eighteen (18) or 35.29 percent have good grade final ratings.

Sabijon, Pioquinto, and Negro (2016) opined that the final ratings or the academic performance are expected because several factors influence the students' academic performance in the classroom and the rating system of their performance depends on their ability to comply with classroom activities. Thus, the basis of final grades is not confined to examination only but to other classroom activities. Therefore, it is expected that a disparity between the comprehensive examination and final grade due to classroom performance will exist.

Table 4. Average Comprehensive Examination (ACE) Results of the Subjects (n=45)

Grade Ranges	Description	Average Final Grade	
		Frequency (f)	Percentage (%)
1.00 – 1.19	Excellent	0	0
1.20 – 1.39	Very Good	0	0
1.40 – 1.59	Good	6	13.33
1.60 – 1.99	Fair	27	60.00
2.00 -3.00	Poor	12	26.67

Twenty-seven (27) out of forty-five (45) or 60.00 percent of the Master of Science Criminal Justice (MSCJ) students had fair ratings (1.60 -1.99) for the comprehensive examinations, while only six (6) out of 45 or 13.33 percent showed good performance in the same examinations. No students got very good or excellent grade ratings in comprehensive examinations.

This data is similar to the previous study of Sabijon, Pioquinto, and Negro (2016), which found out that the majority (22 out of 31) or 70.97 percent of the research subjects, had a fair grade (ranges from 1.60 – 2.00) and only a small portion of the research subjects exhibited good comprehensive rating (ranges of 1.40-1.59).

Based on several years of experience, during the comprehensive examinations, the examination coverage is horizontally spread to significant aspects of the subject matter, and the testing time maybe not be enough for the examinee to finish answering the test questions. Since

the comprehensive examination is a timed examination, the student's performance is influenced by many factors, including extraneous ones (Sabijon et al., 2016).

Table 5. Relationship between the Subjects' Comprehensive Examination (ACE) Results and the Subjects' Profile

ACE Results in relations to:	df	Computed Value	Critical Value	Decision on H0	Interpretation
IQ	3	8.942	15.507	Failed to reject the hypothesis	No Significant Relationship
DAT-Verbal	2	3.857	7.815	Failed to reject the hypothesis	No Significant Relationship
DAT-Numeric	2	2.212	5.991	Failed to reject the hypothesis	No Significant Relationship
DAT-Abstract	2	2.517	5.991	Failed to reject the hypothesis	No Significant Relationship
DAT-Language	1	3.287	7.815	Failed to reject the hypothesis	No Significant Relationship
AFG	2	3.347	7.815	Failed to reject the hypothesis	No Significant Relationship

There is no significant relationship between the intelligence quotient (IQ) of the research subjects and their comprehensive examinations (ACE) performance based on the computer Chi-square value of 8.942, which is lesser than the critical value of 15.507. This means that the Master of Science in Criminal Justice cognitive capabilities is not the primary predictor of their success in the comprehensive examinations as there were lots of influences that would affect their performance.

In addition, there is no significant relationship between the Differential Aptitude Test (DAT) rating in the area of verbal aptitude, based on the computed Chi-square value of 3.857, which is lesser than the critical value of 7.815. This result denotes that the Master of Science in Criminal Justice students' ability to express their ideas and thoughts does not influence their ratings in the comprehensive examinations.

Likewise, there is no significant relationship between the Differential Aptitude Test (DAT) rating of the research subjects in numeric aspect, as denoted by the computed Chi-square value of 2.212, which is lesser than the critical value of 5.991. This result implies that the Master of Science in Criminal Justice students' ability to compute numeral values has nothing to do with their performance in the comprehensive examinations.

Moreover, there is no significant relationship between the Differential Aptitude Test (DAT) results in abstract reasoning abilities of their research subjects and their average comprehensive examination (ACE) ratings based on the computed value of 2.517, which is lesser than the critical value of 5.99.

Another no significant relationship was found in the Differential Aptitude Test (DAT) ratings of the research subjects in language abilities and average comprehensive examination (ACE) ratings, based on the computed Chi-square value of 3.287, which is lesser than the critical value of 7.815. This result implies that the competence of the Master of Science in Criminal Justice(MSCJ) students to understand and explain ideas using the English language does not relate to their performance in the comprehensive examinations.

There is no significant relationship between the subjects' average final grade (AFG) and the average comprehensive examinations (ACE), as indicated by the computed Chi-square value of 3.347, which is lesser than the critical value of 7.815. This result indicates that the student's

performance in class tends to vary with the performance of the comprehensive examination since, in the classroom, there are a variety of blended activities that are rated. In contrast, the students are rated according to their written ability to elucidate the questions asked (Sabijon et al., 2016).

The study of Sabijon, Pioquinto, and Negro in 2016 also revealed that the comprehensive examination results are not significantly influenced by the research subjects' IQ, the different Differential Aptitude Test (DAT) areas, and the average final grades (AFG). In other words, having an IQ level of above-average or low does not affect significantly or is not significantly related to how the subjects perform during the examination. Also, having good grades in the comprehensive examination is not significantly connected to the subjects' IQ or Differential Aptitude Test (DAT) ratings.

In this present study, it can be gleaned in the preceding data that the performance of the Master of Science in Criminal Justice students in the classes as denoted by their final grades does not significantly correlate to their performance in the comprehensive examination.

CONCLUSION

The Master of Science in Criminal Justice (MSCJ) students of the University of Cebu Graduate School had average intelligence levels and impressive academic performance. Moreover, their intelligence level is not a predictor of their performance in the comprehensive examination. However, several intrinsic and extrinsic factors influence their school performances. Hence, the school's general intervention measures may boost students' interest to achieve good academic performance.

Specific intervention strategies such as allowing a preparation time, identifying subjects for the comprehensive examination, and testing time allocation will allow the students to concentrate on the activity. The extrinsic abilities of students, such as their level of performance in comprehensive examinations, are influenced by the students' attitude, preparations, and classroom environment. The intrinsic abilities such as IQ and their specific abilities may somehow influence the performance, but it is not significant in some cases.

RECOMMENDATIONS

Based on the findings, the following proposals are highly recommended: 1) schedules of the comprehensive examination and the courses each student should take shall be posted a month before the scheduled examination; 2) syllabi for purposes of the comprehensive examinations shall be adopted and approved, and must be disseminated to the takers alongside the schedule for the examination; incorporating in classroom activities for verbal and language skills for Master of Science in Criminal Justice (MSCJ) students; intensive career counseling and particular intervention for students with low or below average IQ; and enhancement of students' aptitude by exposing them to group activities.

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LIVED EXPERIENCES AND CHALLENGES OF STUDENTS IN THEIR COMMISSION OF SCHOOL INFRACTIONS

Eilyn B. Palahang

University of Cebu Graduate School
Cebu City, Philippines

Andrea M. Ando

University of Cebu Graduate School
Cebu City, Philippines

ABSTRACT

Commission of infractions in school or outside the school among young students is unavoidable. Students who bear anger, anxieties, and miseries in life usually exhibit disruptive behaviors. Such a situation is observable at the University of Cebu, Main Campus – Junior High School. This phenomenological study explores the experiences and challenges of selected junior high school students. Individual interviews, focus group discussion, and records of the prefect of discipline were used in the study in generating the codes, categories, sub-themes, and arching themes from the narratives of the research informants. There were five (5) themes that answered the sub-problems of the study using the steps in the thematic analysis of Braun and. The theme generated from the experiences and challenges before, during, and after the commission of infractions were: *Influences Greatly Affect the Moral Life of a Student*; *The Person is Responsible and Accountable for the Consequences of His Actions*, and *Learning from Mistakes Prove to be of Great Worth*, respectively. *Realization to Follow the Rules and Do What is Right* was the theme created as the effects of the experiences and the challenges to the informants in the commission of infractions, and *Active Home-School-Community Partnership Shapes the Character and Future of Students* was the theme that surfaced as the effects of the interventions offered by the school in managing those who committed infractions. The output of the study would provide the school administrators with detailed information on the phenomena, which helps provide intervention and policymaking as presented based on the findings. Understanding the life-world of the informants and the contributions of the school's intervention to their transformation is essential in maintaining a safe, healthy, and productive learning environment.

Keywords – Criminology, crime commission, disruptive behavior, infractions, and positive preventive interventions, lived experiences.

INTRODUCTION

Schools face issues and challenges in educating children appropriately and safely. School rules and regulations are set for students to follow to have order and discipline while learning in an educational institution. Particularly in the teaching-learning situation, the staff and other students' safety is greatly affected by the prevalent demonstration of some students' inappropriate, antisocial, and disruptive behavior.

Hoy and Weinstein (2013) revealed that understanding both students and teachers creates a better learning environment for interactions and building relationships. Achieving a safe and friendly environment in an educational institution through consistent positive discipline will hopefully prevent the students from committing any infractions.

The improper monitoring of programs implemented was one of the issues and concerns of Philippine Education through the years, according to Durban and Catalan (2012). Becker (2015) said there should be fair rules and consequences for all to be employed, frequent and consistent feedback regarding student behavior, and other techniques for controlling student behavior. However, there is no existing literature about students' experiences in committing school policy infractions.

Semali and Vumilia (2016) emphasized that learners' discipline is essential for effective teaching and learning. Besides, this will serve as an avenue for the teachers, administrators, parents, and fellow students to understand the underlying reasons that made them demonstrate such disturbing behavior. Furthermore, as an advocate of positive behavioral interventions and in line with being a future leader in an educational institution, the findings of this study can significantly help in managing discipline issues that will emphasize fairness and justice to be applied successfully within a school-wide framework and the variety of challenges and dimensions of learners' discipline engulfed in the classroom.

Cardona et al. (2015) emphasized a need to expand the functions and power of classroom discipline techniques to mitigate cases of behavior problems such as bullying. Further, it may examine the disciplinary practices of the school used to control disruptive behavior and effect a successful implementation, which emphasized the identification, adoption, and sustained use of functional policies, systems, data-based decision making, practices, and strategies to reduce its occurrence.

Despite the strict imposition of the school policies in ensuring that the students will behave according to the educational and social norms, many students still committed violations of the school policies and even committed negative acts, which is a manifestation of undesirable behavior in a student.

The researcher is encouraged to find an in-depth analysis of the experiences and challenges of students that influenced them manifest undesirable behavior in the class and the school in general. It was also observed that these juvenile delinquent Junior High school students were challenging to deal with by their teachers and classmates because of antisocial behavior. Hence, the researcher, as the school prefect of discipline, aims to explore and hear the voices of students through understanding their experiences in committing infractions of the school rules and regulations as well as their challenges in their learning journey and their day-to-day life with their family and the community in general.

RELATED LITERATURE

Turner (2006) argued that humans activate defense mechanisms to protect the ego in the face of negative emotions, which is undoubtedly correct in its essentials. On the other hand, Skiba (2014) believed that academic opportunities are mutually exclusive depending on how the parents, teachers, and administrators employ strategies to teach the students to contribute positively to the self, family, school, and society. However, despite the many applications of Freud's theory in the study of human behavior that will be the basis for analyzing learners'

experiences and challenges, the commission of infractions also has limitations or shortcomings, which will be the basis for further evaluation and analysis (Eysenck, 2017).

Ellis and Tod (2018) posit that human life experiences are based on two distinct categories: exhibited with a high degree of frequency and higher-level behavior. The former refers to the number of times particular disruptive behavior is demonstrated, while the latter is of seriousness as it is reinforced by anger. Further, a restorative discipline approach to school policies and practices through positive discipline founded on respect enforces classroom standards and builds cooperation among stakeholders (Jones, 1987).

Rothe (2017) emphasized that personality motivation and how learning and growing up can scientifically assess the learners' experiences concerning their rights. Similarly, Lunenburg (2011) found the importance of the relationship between specific and challenging goals and effective performance towards self-efficacy for those emotionally disturbed individuals.

Behaviorists believed that human behavior is controlled by external environmental factors, which lead to identity formation, the basis for morality, and the emergence of values (Maslow, 2013; Winston, 2016). Accordingly, not experiencing pain may turn out to be a kind of overprotection, which implies an absolute lack of respect for the integrity and intrinsic nature and the individual's future development. Further, Ozguner and Ozguner (2014) revealed that it is necessary to meet the needs of high-level motivational factors to satisfy and understand human behavior to achieve high-level performance.

Punishment is an ineffective means for managing behavior, often creating more problems than it solves (Powell et al., 2016). However, teachers and other staff in school can prepare the students to contribute positively to be in a relationship with the self, others, and the curriculum as a reflection of the quality of relationships that characterizes classroom interactions as influenced by learning and behavior (Ellis & Tod, 2018).

According to Siemens (2014), change in behavior as an index resulting from experiences and practices reinforced in school is about manners in facing challenges in life. Similarly, to build the first act to replace disruptive behavior is to develop mutually respectful relationships, maintain proper classroom management, and create a positive learning environment that is conducive for all students in all seasons (Jones, 1987). An appropriate, safe, and healthy environment, where students' engagement, learning social control, the ethical concepts of rewards, and penalties in a friendly-learning classroom are enhanced and linked to working and consequences to behavior (Ching, 2012).

Reinforcement techniques that may be positive or negative can benefit animals and treat human disorders such as social behavior. Often, the concepts of behaviorism are used by teachers, who reward or punish student behaviors (Skinner, 2011).

On the contrary, Richelle (2016) emphasized the intriguing aspects of the analysis that fail to solve current social practices of the most urgent problems humankind is confronted with today, even with Skinner's modern evolutionary analogy of dynamic behavior. Despite this reality, the desired learning outcomes rely on understanding observable behavior and the universal laws of conduct for each learner's intrinsic desire for personal development (Linerós & Hinojosa, 2012). Thus, to make a change in a cost-effective way that frees the teacher to focus on instructions rather than on discipline, the former should manage the classroom effectively (Jones, 1987). Evertson and Weinstein (2013) revealed that effective behavior intervention is an opportunity to teach self-regulation, social-emotional learning, school connectedness, trust, caring for others, peacemaking, and allowing students to engage in negotiations to resolve conflicts.

It is believed that a thorough evaluation of the impact of advocacy services for the voice of the child or his participation to be heard in any investigation process will reduce risks and achieve better outcomes for children at risk (La Valle et al., 2012). They should learn how to make socially-appropriate decisions (Gomez, 2013) with a participative life in school and a perception of safety and the feeling of the importance of being involved in any decision-making process that would reduce negative school perceptions (Harel-Fisch et al., 2011). Further, Becker (2015) emphasized that employing fair rules and consequences for all, frequent, and consistent feedback regarding student behavior and other techniques, as well as policy and guidelines on protecting children in school from any forms of abuse (Department of Education [DepEd] Order no. 40, 2012), are necessary for controlling student behavior.

Instead of reducing behavior by removing those who committed infractions through suspension, the authors recommended establishing substantial revision to discipline policies/guidelines consistent with positive behavior support models (Fenning & Rose, 2007; Allman & Slate, 2017). Implementing school-based prevention strategies may help minimize students' anti-social behavior and role expansion behavior. These became possible when it involved well-controlled studies, long follow-up periods, and proper guidance for a behavior change (Lösel & Beelmann, 2003; Baker et al., 2008; McCurdy et al., 2009; Zimmerman, 2013).

Lewis et al. (2008) opined that teachers' classroom disciplinary behavior dramatically affects students' attitudes towards schoolwork. Students with low social economic status had low scores on the given standardized test (Hope & Bierman, 1998; Breitenstein et al., 2009; Blank & Shavit, 2016); Koca, 2017); thus, there were higher rates and significant tendencies for them to demonstrate disruptive behavior in the class which was unidentified and untreated. This increased the risk of suicidal ideation and attempts (Hepburn et al., 2012). Further, according to Ncontsa and Shumba (2013), school violence had the following effects on learners: loss of concentration, poor academic performance, bunking of classes, and depression.

Hinting and engagement of students in classroom discipline decision making relate to the stronger belief that the disciplinary actions taken are warranted and referred back to student behavior agreement (Lewis et al. (2008); Hagenauer et al. (2015); Rogers (2015). At the same time, Evertson and Weinstein (2013) believed that the very foundation of students' trust is ultimately influenced by the teacher-student relationship and added that there were aspects in people's lived experiences such as lived space, body, time, and human relations (Van Manen, 2016). Also, there is a necessity to plan appropriate instructions for students' academic development, behavioral engagement, and academic achievement as these are predictors of self-perception of control of students' likelihood to do school violence, drop out from school, and other infractions (Fall & Roberts, 2012) and to monitor the likelihood of teachers' successful implementation of rules and regulations to come up with an outcomes-based education at the classroom level (Aldridge et al., 2011).

Parents ought to be educated on the importance of adopting the parenting style that would promote their children's development (Erdogan et al., 2010; Steinberg & Darling, 2017; Obiagaeri, 2018).

Alves et al. (2010) and Pacione (2015) revealed that to become a lifelong learner by economic aspects, one must give importance to citizenship social inclusion and improve life skills such as socialization, problem-solving, and decision-making. Each individual is responsible for developing his learning and becomes more and more accountable for others. These came from classroom management that supports children's social, emotional, and moral

education. Thus, these learners can contribute to a new equitable social order and promote academic, social-emotional growth, and self-regulated behavior (Evertson & Weinstein, 2013).

Children who are actively involved in any household work, especially in cleaning tasks, are positively associated with student achievement in promoting academic success to ensure positive reinforcement in the home (Leake & Leake, 1992; Palmer & Gasman, 2008; Dashtseren, 2018). They should be educated on the value of work and engage in productive activities (Gomez, 2013). Also, more engagement in school work may result in higher academic achievement, improved attendance, and fewer discipline problems (Florido, 2006).

Hyder (2018) recommended that parents, teachers, and administrators of the school should provide equal opportunities for participation to children in decision-making and all other activities and a safe school environment. Further, Erdogan et al. (2010) revealed in their studies that the importance of understanding the reasons for every problem is achieved by having a solid home-school partnership. However, Potts (2006) examined and found out the dangers in school from pupil to pupil, teacher to pupil, teacher to teacher, pupil to teacher, and risks from the physical and natural environment.

Bosworth and Judkins (2014) offered a design to build a positive school climate by defining and consistently reinforcing positive behavioral norms. This focuses on teaching and acknowledging a positive approach that changes behavior that promotes protective factors, mitigates risk factors, and increases the feeling of safety. The opportunities/participation of stakeholders in decision-making remove the risk of fear and provide bravery and confidence among students. It would enhance the interest of students in the teaching and learning process. It will ultimately improve students' life skills, such as socialization, problem-solving, and decision-making. Moreover, these life skills that will be enhanced by factors found in the research of McCallion and Feder (2013) to be relevant and practical were parent training, parent meetings, firm disciplinary methods, classroom rules, and improved classroom management and supervision. Likewise, classroom teachers found school rules more functional when involved in rule-making (Demirkasimoğlu et al., 2012). Learning must be a way of being- an ongoing set of attitudes and actions (Siemens, 2014) to increase engagement in an appropriate level of challenge and relevance and allow students to feel in control of their actions (Shernoff et al., 2014).

Hornby and Lafaele (2011) stressed ensuring excellent achievement standards, thus making a positive contribution to society and the economy and having lives full of opportunity. Education served as a prevention and development approach to cope with the present complex scenario in life, help individuals face problems with a positive attitude, and go about with the tasks effectively to minimize violations of school rules and regulations (Behrani, 2016; Lingon, 2019).

DOMAIN OF INQUIRY

This study explored the lived experiences and challenges encountered by the Junior High students who committed infractions into the policies of the University of Cebu – Main Campus, Cebu City. The study sought: (1) the experiences and the challenges of the informants (before, during, and after) the commission of the infractions; (2) The effects of the experiences and challenges to the informants in the commission of the infractions; and (3) the effects of the interventions offered by the school in managing those who committed infractions.

METHODOLOGY

This section discusses the research design, research environment, research informants, research instruments, data analysis steps, and ethical considerations.

Research Design

This study utilized the phenomenological research design. This phenomenological inquiry focused on the experiences and challenges of students of their commission of infractions that may be done at home/in school/the community. Phenomenology is a method of research and study that tries to understand the human experience by analyzing a person's description of that experience.

According to Van Manen (2016), there are four aspects that people have lived experiences, lived space, lived body, lived time, and lived human relations. The study also often involves four steps: bracketing, intuiting, analyzing, and describing the informants' experiences and challenges before, during, and after any infraction had been committed.

Research Environment

The research was done at the University of Cebu, Main Campus, Junior High School (JHS) Department, Cebu City, Philippines. A principal heads the main campus's junior high school (JHS). Her staff comprises eight (8) subject coordinators, four (4) level coordinators, an administrative assistant, coordinator for students and faculty development, and prefect of discipline. Further, the department has seventy-two (72) licensed teachers and seven (7) non-teaching staff. To reach the goal for global competitiveness towards the culture of excellence, JHS – Main is well - equipped with necessary tools and facilities in developing student skills in cooking, computer, 2D Animation, Electronics, Technical Drafting, Front Office Servicing, Robotics Laboratory as well as the Science Laboratories, Speech Laboratory, and the fully air-conditioned classrooms.

Research Informants

There were twelve (12) informants of this study. They all underwent an individually In-Depth Interviews (IDI) purposive sampling technique. Six (6) of them were also interviewed through Focus Group Discussion (FGD). They were chosen based on the behavior exhibited with a high frequency, such as class disruption due to the aftereffect of using marijuana. Six (6) of the informants were into selling/using marijuana. Further, other offenses committed but not limited to were: stealing, fighting, cheating during major examinations, sexual harassment, and immorality (creating and posting pornographic materials using social media). This demonstrated behavior is usually underpinned by anger, anxieties, unguided, and miseries in life.

Research Instrument

In gathering data, the researcher employed a panel-approved interview guide consisting of the following: the first part dealt with the experiences and challenges before, during, and after the commission of infractions, while the second part dealt with the effects of the skills and challenges to the informants, and third part dealt with the interventions the school has offered in managing the informants in the commission of infractions. The researcher utilized field notes and a voice recorder to document the informants' responses accurately. In this way, there was no confusion in ascribing the reactions.

Data Analysis

The researcher analyzed the data through coding (using the software Doc Tools), categorized, and determined the phenomenon's essential meaning. From the informants' responses, the researcher extracted significant statements and formulated core meanings. Then all core meanings were clustered and developed the themes to understand better the description of the lived experiences and challenges of the informants. After thorough reading and analysis, the researcher created five (5) emergent themes pointed out the answers to the sub-questions in this study.

Ethical Considerations

The researcher personally provided the informants with the informed consent form requested them to participate in the research with the specific title. The researcher personally informed them of the purpose of the study, and they were given enough opportunity to talk to anyone with whom they were comfortable before they decided to participate in the study. Informants were advised not to hesitate to ask questions to the researcher if they could not understand the contents of the study. They were informed that their participation is purely voluntary, and they can choose to participate or not.

The researcher requested the informants to share their experiences and challenges before, during, and after they have committed any infractions and the effect of the interventions given by the school and informed them that all information gathered during the interview was documented tape-recorded. No one had access to the said documents as the tapes were kept and deposited at the Research Office of the University of Cebu.

They were also informed about the risk, especially if they felt uncomfortable in answering questions, they had the options to respond or not, and they were also aware of the benefits of the study.

RESULTS AND DISCUSSIONS

This section presents the themes developed for (1) the experiences and the challenges of the informants (before, during, and after) the commission of the infractions; (2) the effects of the experiences and challenges to the informants in the commission of the infractions; and (3) the effects of the interventions offered by the school in managing those who committed infractions

1. Experiences and Challenges of Students Before the Commission of Infractions

a. Influences Greatly Affect the Moral Life of a Student. This theme relates to the experiences and challenges of students before the commission of infractions. It was pointed out that life's problems and emptiness caused by family, friends, and community influenced one's being. One of them said: Informants 6, 7, 8, and 11 uttered the following statement:

“The negative thoughts which started and experienced in the environment, in the streets, in the family, in life and brought to school as part of my baggage. The way to express myself from these, I wrote my feelings on the walls, chairs, CRs, and even in the test papers. Example, “Fuck You,” aside from vandalizing, using and selling of marijuana.”z

My heart palpitated, can't explain the feeling because of being pushed by friends to do such thing.”

“According to what others were saying.”

"I am just an ordinary child who liked fun with my environment even though it's chaotic, rampant selling of drugs, many are chasing until witnessing killings."

"Problems of school fees, the money intended for payment was spent of the vices. I was unhappy at home, self-problems especially when I like to buy something and no amount of money to spend, It seems life has no direction at all. I'm tempted to think why is it in life many is nil."

"It seems empty, marijuana supposed not to be sold, it's to be given to those who need them as an herb. Keep asking myself, if it's correct but no answer came in my mind. The family which is supposed to be the source of energy and the attention I'm seeking, this is to no avail. I've been bullied in my previous school up to the point that I was sexually molested and many bad things I experienced, crying.... These things kept on coming back that is why I am making myself busy but in the wrong way. It's not easy to forget the saddest moments of my life."

"It were my friends who kept on mocking me. It was all my choice, I found them happy so I tried since it's rampant in the locality. I encountered many challenges like being envious because they are in group so I joined to belong."

"Sometimes I overthink things since my family is not here, I'm alone, friends keep away from me, they come only when they needed me. I had no one to consult with and was carried away by the situation. Later, I found out that I will not force doing things inaccurately. At first I was thinking no one owns the book since it has no markings, I didn't have any at that time."

It was just for fun. It relieved my pain when my girlfriend broke up our relationship."

Another cluster theme related to the experiences and challenges in life before the students committed any infraction is being unguided with inherent unpredictable behavior in the community amidst life's miseries and anxieties.

2. Challenges of Students During the Commission of Infractions

a. The Person is Responsible and Accountable for the Consequences of his Actions. One of the definite manifestations of emotionally unstable students is to exhibit disruptive behavior and disrupted the class activities as well as of the parents, as quoted:

"My heart beats faster, am afraid but others were pointed out, not on me until the mother who happened to be one of the teachers got angry and wanted to sue us). Many went with me to take a share of the supposed fighting event in the Junior High School. Good the class mayor was so brave, he did not allow his classmates to fight back."

Suddenly the teacher's daughter inserted, I accidentally flicked the strap of her bra. Honestly my heart beats so fast that I can't explain). I was a bit afraid, I couldn't just accept what I witnessed at the canteen when a guy offered gallantly his 500 pesos to my girlfriend for her tuition without him knowing that I was at their back eating with my friends). If one can use marijuana, you'll be happy without thinking what will happen next). A video was taken while we were busy copying/sharing answers. It was really fun."

"I don't know mam, I or almost all of us didn't study and our adviser-proctor went out for a while and the teamwork happened and one of us took a video and uploaded them on social media. My heart palpitated, can't explain the feeling. My environment is changed, I can't explain. I stumbled when I ran after the ball and as soon as I tried to stand up, I happened to hold her pants. But still I failed to stand due to my body built, I'm heavier than her. Once I was able to stand up I saw her crying, then I was told by my classmates that her pants were pulled down by me including her panty I asked sorry right away for what had happened. She is my best friend. The bell has rung."

"Sometimes I overthink things since my family is not here, I'm alone, friends keep away from me, they come only when they needed me. I had no one to consult with and was carried away by the situation. Later, I found out that I will not force doing things inaccurately. I was about to be spanked by the lady supposed to be my victim, still I accused others. Suddenly, somebody was looking for her book, I pitied her when was about to return it, my friends insisted saying, it's his book). I tried. It's all true you will feel happy, with heightened appetite but sleepy later). Started to have many questions and fear in life."

“When my parents knew about it, good I was not scolded nor physically punished. I stopped because I landed in the hospital to cut the story short. I was rehabilitated in Mandaue, a private institution, they spent quite a large amount. While I was recovering, I decided to stop schooling for one school year because of shame.”

“I was worried, for sure I will be out of the Honors’ list. However, I continued to work harder because for me life must go on, it’s like a wheel sometimes up and sometimes down continue rotating in spite of the obstacles and problems in life. All good things that have been done were covered up by even a little mistake. One needs to rise up and move on. Don’t look down on yourself, do what is right and try to get back other’s trust on you. After I was suspended, which I learned and realized a lot of things, only one subject decreased, the rest increased due to the mindset that I need to continue for medals are only for display, I focused more on the interventions UC is doing for me and my grades kept on increasing and still serving as a leader of the UPSURGE, a dance club of UCJHS.”

3. Challenges of Students After the Commission of Infractions

a. Learning from Mistakes Proves to be of Great Worth. For the quest to know the experiences and challenges of the students after the commission of infractions, the informants found out learning from mistakes took a lot of trials in life, like gold tested in fire. For them, the school can greatly affect their transformation into a better one as quoted:

“Before I did those, I was weighing the good and bad side of my creations but because of temptations, I posted those for me if it’s incorrect, so I be corrected. I am not afraid to commit mistake since I will be learning from it”.

“It was my own will to try, by and by it was just nothing and back to normal, but I felt hungry sometimes I stole rice from my relatives if not available at home and I don’t have money to buy food to satisfy my needs after the hangover). (It’s fun, it’s right that one will keep on laughing, but slowly it destroyed my way of thinking.”

“Conference followed, it so happened that they went right away with the principal, I was traumatized, crying I was not able to speak for myself. I felt that time, only one side was heard. I didn’t tell my aunt whom I called mommy because I’m afraid of her reactions and actions.”

I am positively disciplined, to be respectful, behaving appropriately and not taking for granted the school rules. When I was suspended, I was happy because it lessened the constricted feeling, that was also an opportunity to cleanse my conscience even though it wasn’t intentional”.

The pursuit of happiness to forget their sorrows and miseries in life without knowing to end up being wounded, and they had affected others.

4. The Effects of the Experiences and Challenges to the Informants’ Lives

a. Realization to Follow the Rules and Do What is Right. It is inherent in any human being to be good. The informants of this study realized the importance of following the rules and regulations of the school and doing the right thing, as mentioned below:

“Behave accordingly and follow rules and regulations found in the handbook as well as the binding agreements signed during enrolment. Listen to your parents, teachers and all school officials who discipline and guide you to do the right things in life. To those curious enough to try different vices, see to it that you know how to go out from the cycle of vices or else just do what is right.”

“They reported me to the teacher who came in and to the level coordinator. The conference was set for us with our parents the following day). When I was called for series of conferences by my teachers, POD and principal, then I realized that it was wrong and was told by my parents to learn from my mistakes. My thoughts were focused on what I have done, why I continued doing it and said

to myself that it was really wrong, I'm not going to repeat it since I know the possibilities that might happen. These reflections were the effects after the pieces of advice given by the teachers and staff of UC, that it's not really good to rush on things. Maybe fanciful today, but regrettable later. I was out of the Honors' List due to that offense). I felt that my heart was shattered by fear that I might be caught. This is not what I want, but it made me happy."

"I have tried also being at the 2nd chance for 3 weeks. Later, I found out that I will not force doing things inaccurately. In the first parents' conference, I was not included, the case was still unsolved. The second, I was already part, my heart beats so fast. It's fun, but later on, being sorry of what I have done. Look being good especially when investigated by the officer-in-charge. I was hospitalized due to anxiety which made my body suddenly tremble as an effect of marijuana. Afterwards, I was so repentant and said why I did that I ruined my life and realized it's good to stop it little by little. Sometimes I tried not to join the group and they dislike it and they don't treat me as a friend. I'm sure it did happen also to other students."

Not all can realize speedily; some took them more time, more conferences to learn. However, some by nature, were reflective thinkers who could change things for the better by nature.

5. School's Interventions in Managing Infractions Committed by the Informants

a. Active Home-School-Community Partnership Shapes the Character and Future of Students. Last but not least, among the themes that speak about the recommendations of the informants to enhance strength, the discipline policies to help more students who went astray, but the light was shed over them. Doing follow-up to those who committed infractions was needed, like how these students expressed themselves of being grateful:

"Many interventions the school has offered to me. I have changed a lot in the way I follow the rules in wearing the uniform, having prescribed haircut and many more because of the constant, little by little reminders by the teachers and administrators of the Junior High School. I must include also the parent's conferences and referrals to the guidance as well as being suspended with community service. I have learned many things those days and I treasure them). I have learned a lot and grateful when I was suspended for about one week which I realized what have I done, how to discipline myself, and did my reflections. Being suspended was a big help in my transformation. I asked myself, "what will happen to the students if there's no POD?" Don't tell me the students will do whatever they want. My understanding when I was at the POD helped a lot in realizing how beautiful life is). We had attended a lot of conferences at the POD, being sanctioned with suspension and community service, advised to transfer but was settled. Given many chances, until I was promoted to the next level. At some point there were interventions like conferences with the teachers and with POD. The teachers shared to us their experiences that made them who they are now or how they were transformed by and by."

"Talk and listen to your child who violated some school rules. Let him/her realize it effects to his/her well-being, striking the iron rod is not advisable or else the situation will be worsened. If this happens to your child like me, don't get mad or lose hope, talk to him. He will realize later on how much everybody loves him/her and eventually change for a better. Attend the conferences at once).. Keep an eye on your children like me, I misled my mother. That's why we misunderstood each other but I believe she knows how I respected her. It's our family members who can understand us. We're grateful that we're born, partly know why we become like this, we committed infractions unconsciously due to the piled up negative unresolved emotions. Treat us children, same as you treat yourselves for us to grow being responsible. Attend the conference to show support and guidance for the future of your children. Listen and talk to your children softly, don't punish them if they commit any infractions instead guide them to realize their wrongdoings. Let change begin within himself. Don't lose hope. Support all programs to change your child, listen and understand their situation. It helped a lot, the constant coming and begging for many chances to be given to me every time we have conference, until I realized I need to change). Proper guidance, be there for your children as

they grow up. (Set aside quality time for your children. Show importance to each child. Refrain from comparing them). (Listen to the side of the child, trust them again to prevent them from being distressed.)

“Talk gently to the offender, even though how high is he. He will understand the infractions committed. Be alert, observe well your students! Don’t harass them right away when caught committing any infractions. We know also the child protection policy. Continue to study the most effective way to get students’ attention to be away from violating any of the school rules and be ready to listen to each child). Guide the students to follow the right direction) (Continue guiding the students to follow the right direction.”

“Chances be given to those who committed grave offense. Who knows this will be the turning point of his life for a change, but still will suffer consequences according to his infractions. (Find possible ways to help that his light for the future will not become blurry in such a manner that will not also destroy the good name of the school. Take it easy, maintain the good name of the school by the actions taken for every infraction the student may commit). (Understand the situation and create programs/projects for children like us who committed any violations. Talk to the student gently and carefully, some are fearful to speak. Continue being strict/firm to the rules but gentle with the students. Give them chance to transform or redirect by listening to the reasons why they committed such infractions.”

“Avoid misbehaving to be free from any violations and may the community help them to do good. Let’s stop doing things that will ruin our environment instead do otherwise. It’s up to them, keep themselves away from any vices. We are users, not destroying other people and nice to talk to.”

Parents play a vital role in the development of each child; it also implies that their involvement in school affects so much in reducing or preventing disciplinary problems and coming up with a life-long commitment. Thinking beyond the box is needed for the teachers to guide the students entrusted to them to transform them into lifelong learners. The future of our country requires the community to provide suitable facilities for them to perform their functions on socialization and social control. Help them become vice-free individuals.

Data Analysis

Data were analyzed through coding (open, axial, and selective), categorized, and created a sense of the essential meaning of the phenomenon. The emergent themes were constructed to describe the experiences and challenges of students in their commission of infractions that may happen inside or outside the school.

1.Experiences and Challenges of Students Before the Commission of Infractions

a. Influences Greatly Affect the Moral Life of a Student. The theme speaks on the experiences and challenges of the informants before the commission of infractions. The common reasons for the informants committing violations of school rules and regulations were due to curiosity, peer pressure, family problems, including lack of proper parental guidance. Informants further described that they committed infractions as an outlet of the destructive energies, life's sorrows and miseries, out of curiosity, and to belong.

Non-classroom settings are often the most violence-prone areas within a school. Results showed a decrease in disruptive behaviors following the implementation of a "supervised lunch period" in preventing antisocial behavior, role expansion, and promoting school-based prevention strategies (McCurdy et al., 2009).

However, cognitive-behavioral programs had the most substantial impact on antisocial behavior, especially when they involve more well-controlled studies, and long follow-up periods are needed (Lösel & Beelmann, 2003). The academic task that demands hard work leads to less

student engagement and more disruptive behavior when not adequately guided (Baker et al., 2008).

A significant proportion of young children with disruptive behavior problems go unidentified and untreated (Breitenstein et al., 2009). These findings enlightened the researcher's mind to do more and suggest programs that may identify and later find ways that this kind of behavior be treated. Proper coordination with the guidance services can be a solution to address this situation.

2.Experiences and Challenges of Students During the Commission of Infractions.

a. *The Person is Responsible and Accountable for the Consequences of his Actions.* A child's behavior at school would be heavily influenced by the increased exposure to aggressive behavior and deviant peer support experienced. For instance, those who have been bullied and those who have bullied others are at increased risk of suicidal ideation and suicide attempts (Hepburn et al., 2012). Further, this will lead to higher school conduct problems, as frequently mentioned by most informants and supported by Hope and Bierman (1998) in their study.

Accordingly, the informants acknowledged that the school had offered them avenues that have turned out to be moral lessons; thus, they taught them to become responsible and accountable for their actions, themselves, and others. The proper care and equality at home and in school lead them to change for the better. Further, this equal participation removes fear and provides bravery and confidence among students in the teaching and learning process. Ultimately, it will improve students' life skills, such as socialization, problem-solving, and decision-making (Pacione, 2015).

3.Experiences and Challenges of Students After the Commission of Infractions

a. *Learning from Mistakes Proves to be of Great Worth.* Acceptance from the loved ones at home and in school helped a lot in the transformation of the informants. The findings of Hope and Bierman (1998) stated that developmental models of behavior problems and preventive interventions must be looked into for implementation to help the youth become an asset to the family, school, and society.

Moreover, learning is achieved when students are well motivated by giving effective rewards and penalty systems that promote positive behavior and regular attendance, which are essential foundations to a creative learning and teaching environment; thus, there is a behavior change (Ching, 2012).

4.The Effects of the Experiences and Challenges to the Informants' Lives

a. *Realization to Follow the Rules and Do What is Right.* The school has the responsibility to make the students understand fully and take the importance of following rules and regulations and the policy on the code of conduct seriously. Teachers must take an active part in implementing the school's policy and processes; create more engaging, productive activities/strategies to overcome problems on the code of conduct. The school administrator should issue a memorandum requiring all teachers and staff to implement the school policies (Lingon, 2019) strictly.

On the one hand, all behavior consequences are referred back to the student behavior agreement, which outlines the rights, responsibilities, rules, and outcomes. Within the emphasis of the classroom agreement, the students need to see his inappropriate behavior. While also being

encouraged to accept the support offered to face the consequences of the thoughtless, irresponsible, and wrong behavior (Rogers, 2015).

Moreover, one of the studies concluded that a disruptive classroom climate could hinder the learning process and lower the achievement of the entire class, regardless of the conduct of any particular student (Blank and Shavit, 2016). Otherwise, the learner displays personal initiative, perseverance, and adaptive skill in pursuing a behavior change (Zimmerman, 2013).

5.School's Interventions in Managing Infractions Committed by the Informants

a. *Active Home-School-Community Partnership Shapes the Character and Future of Students.* This theme which served as the effect of the informants' experiences and challenges in their commission of infractions, was very evident through the different interventions in ways that they had given their recommendations to their fellow students, parents, teachers, administrators, and the community. Below are some excerpts of the studies conducted in line with the theme:

The role of social capital in promoting academic success (Palmer and Gasman, 2008) was emphasized by this study, with tips on effective teaching to ensure positive reinforcement in the home (Leake and Leake, 1992). Hyder (2018) recommended that parents, teachers, and administrators of the school provide equal opportunities for children's participation in decision-making and all other school activities. Further, this equal participation removes the risk of fear and provides bravery and confidence among students in the teaching and learning process.

While Steinberg and Darling (2017) explained the effects of parenting style as a function of the child's cultural background, the processes through which parenting style influences the child's development, and the operationalization of parenting style. It was also revealed in the study of Dashtseren (2018) that child involvement in household work is positively associated with students' achievement, which means less possibility of conflicting with the school rules and regulations.

Through the informants' responses, this theme is the product of considering their fellow as the recipients, actors/actresses in the learning process. Parents must participate in the school's activities. This serves as a life-long commitment to their children. Similarly, teachers may serve as the agent of change-counterpart for that commitment. The administrators are advocates of students' positive discipline to keep their lights burning. Lastly, the community, as a social being enhancer, supports the home and school to mold the child into a socially responsible and accountable being.

Despite all the reasons mentioned above why students misbehave, some studies will shed light, giving solutions or preventing future problems in every classroom. For example, Erdogan et al. (2010) suggested understanding the reasons behind the problems, meeting with the parents or having a home-school partnership, and providing coordination among different subject communities in schools and stakeholders.

Finally, students come to school very fragile. They come from families that have thrived in the most challenging conditions, and individuals have survived in the harshest families. They belong to a society that does not exist in a vacuum. It is the place where individuals and families live and work together.

IMPLICATIONS FOR PRACTICE

From the inquiry's findings, the following recommendations, suggestions, and measures for implementations:

1. Strengthen the inclusion of the Home-School Agreement during the enrollment to the identified disciplinary-at-risk students. In the deliberation process, students who encountered any disciplinary proceedings be included so that during enrollment, their parents must come to sign the forms personally. Rogers (2015) stated that all behavior consequences are referred back to the student behavior agreement.

2. Strengthen the implementation of the Child Protection Policy. This Dep. Ed Order No 40 s. 2012, must be taken seriously by everybody to avoid unexpected violations, may it be done by a student to a student or a teacher to a student. Some of the recommendations are: give clear policies and consequences for any infractions; talk gently to those offenders, even though how high is he/she will understand of the infractions committed; be alert, observe well your students; do not harass us right away when caught committing any infractions, we also know the Child Protection Policy; guide the students to follow the right direction; and understand and listen to the experiences/feelings of those who violated the rules, and give advice gently

3. A sustainability model for reducing and preventing disruptive behavior in school needs to be implemented. It is high time for the Junior High School Department to have a transparent model for reducing and preventing any infractions committed by the students. In addition, support enhances students' safety and protection by ensuring good services, particularly on positive discipline. It could be practical side by side with the child protection policy this department will adopt.

4. Implement an annual-departmental seminar on effective parenting. It has been observed that many of our students belong to dysfunctional families. Parents are no longer conscious of training their children on basic life skills. This would be why they are easily influenced by their peers, what they observed in the environment that affected them so much. The question is, are the parents still aware of their responsibilities as effective parents? The researcher believed that the school has its responsibility to offer this program to the parents to lessen the problems, hopefully on disruptive behavior of our students.

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HEALTHIER CARE, LONGER LIVES: ISSUES ON NURSING CARE OF HEMODIALYSIS PATIENTS

Joy Ann Marie A. Cariño

<https://orcid.org/0000-0002-1517-9029>

University of Cebu
Cebu City, Philippines

Maria Estella P. Cabataña

<https://orcid.org/0000-0002-9986-3142>

mastella17@gmail.com
University of Cebu
Cebu City, Philippines

ABSTRACT

This study explored the lived experiences of nurses in hemodialysis care in a tertiary hospital. Specifically, this study delved into the various issues of renal nurses as they render nursing care to their patients. The phenomenological research design was utilized in the study. There were eight (8) informants selected from a tertiary hospital. The researcher utilized a structured interview guide. The common themes developed are *A Tough Journey to Medication Compliance; Difficulty on Changing Old Habits; Deteriorating Patient's Condition due to Financial Pressures; A difficult Entry to Hemodialysis World; Infection Dilemma; and Patient's Experiences Through the Nurses Lens*. The researcher noted that knowing the pressing issues of nurses and ways to lead healthier care will encourage the nurses and the institution itself to develop ways to improve hemodialysis care.

Keywords - Nursing care, renal patients, managing issues, Phenomenology, Cebu City

INTRODUCTION

For patients, going to dialysis several hours a day, three times a week for many years, can be challenging. As the patient's primary contact at the clinic, the nephrology nurse can make all the difference in their experience and outcomes. Passionate about patient care, nephrology nurses employ a combination of compassion and proactive guidance to ensure the best outcomes and ensure patients continue their vital therapy and thrive. Providing so much value to patients' lives can be incredibly rewarding. Nephrology nursing also provides a challenging career path by providing the opportunity to develop deep expertise in the evolving field of kidney care and the opportunity to fulfill nursing ambitions and goals (Belmonte, 2017).

Hemodialysis requires specialized nursing care, including establishing a therapeutic and interpersonal relationship, treatment of physical symptoms, and attention to the functional limitations, mental disorders, and educational needs of these patients. Nurses are the prominent people who provide care for these patients, and their most important responsibility is to identify the essential care of these patients. Hemodialysis patients need mental support to adapt to their

current status, and nurses can help them become accustomed to their problems and fears of the disease by reducing anxiety, enhancing adaptability, supporting decision making, and providing emotional support and education. Therefore, nurses' awareness of the high quality of care can affect the care of these patients and increase patients' satisfaction; notably, the quality of the provided nursing care is an essential indicator of nurses' involvement in the care program (Davison, 2010).

Nephrology nurses face a rapidly changing health care landscape, shifting patient demographics, an explosion of technology, and a multitude of everyday challenges. Nephrology nurses face challenges associated with patient safety and satisfaction, access to services, clinical outcomes, health disparities, and regulatory changes. Dealing with these concerns and other workplace issues, nurses have the choice to continue trying to make do while feeling victimized by current changes or to motivate themselves to take action and find opportunities to bring about change in the health care system itself (Mick, 2004).

As a medical-surgical nurse, the researcher encountered the sad moments when kidney patients suffered so much agony and pain during hemodialysis treatment. Thus, the researcher would like to explore the lived experiences of nurses as they care for their patients undergoing hemodialysis. As nurses whose primary role is in improving the health condition of their patients and spending much time with them, a more profound insight will be of great help in improving the quality of care for their patients.

RELATED LITERATURE

The structure for the science of caring is built upon ten carative factors. These are: embrace, altruistic values and practice loving kindness with self and others; inspire, faith and hope and honor others; trust, self, and others by nurturing individual beliefs, personal growth and practices; nurture, helping, trusting, caring relationships; forgive, and accept positive and negative feelings – authentically listen to another's story; deepen, scientific problem-solving methods for caring decision making; balance, teaching and learning to address the individual needs, readiness and learning styles; co-create, a healing environment for the physical and spiritual self which respects human dignity; minister, to fundamental physical, emotional and spiritual human needs; and open, to mystery and allow miracles to enter (Watson, 2014).

The transpersonal caring relationship focuses on the one caring, and the one cared for. The nurse and patient can develop a deep divine relationship that blends and promotes overall health and well-being. This process requires the use of actions, words, behaviors, cognition, body language, feelings, intuition, thought, senses, and the energy field (Watson & Woodward, 2010).

The nurse has a professional and a personal obligation not only to see the patient as more than an object but also to protect and assist with improving the patient's dignity. The caring occasion/ caring moment focuses on an actual tangible moment in which the nurse recognizes the connection that is developed between him/herself and the patient (Cara, 2003).

The caring processes are maintaining belief, knowing, being with, doing for, and enabling. Maintaining belief provides the foundation of caring and refers to believing in another person's capacity to work through and find personal meaning in his or her experience regardless of the challenges or conditions faced. Knowing is striving to understand what an experience means from the perspective of the person living it. Being with refers to being authentically present with another person to convey that their experiences are essential and include the subcategories of

being with, non-burdening, conveying availability, enduring with, and sharing feelings. Doing for means doing for others what they would do for themselves if possible. Doing for consists of comforting, performing competently, preserving dignity, anticipating, and protecting. Enabling refers to assisting others in gaining the tools needed to care for themselves. Enabling includes validating, informing, and supporting participants, giving them feedback, and helping them to focus and generate alternatives (Swanson, 2013).

Nursing is an educative instrument, the maturing force that aims to promote forward movement of personality in the direction of creative, constructive, productive, personal, and community living (Fawcett, 2005).

The nurse-patient relationship is an interpersonal process made up of four components: the client, the nurse, the professional expertise of the nurse, and the client's problem or need for which expert nursing services are sought. The nurses work in the orientation phase as a counselor to establish a relationship with the patient and family and identify actual or potential problems. By the end of the orientation phase, the nurse and the patient are no longer strangers and are ready to move into the operational phase of the relationship so that planning can begin and problems that have been identified can be resolved. Once the operational phase is achieved, the nurse-patient partnership is clarified to agree upon the patient's level of dependence/independence. A problem will be identified; the nurse supports the patient's abilities moving towards independence. The termination phase occurs when the patient's problem is resolved and ready for independence from the nurse (George, 2011).

According to the World Health Organization [WHO], kidney disease is associated with a tremendous economic burden. Kidney disease is a hidden epidemic affecting more than 850 million people worldwide. That is twice the number of people with diabetes (422 million) and more than 20 times the number of people with cancer (42 million) or HIV/AIDS (36.7 million). In 2015, 1.2 million people died from kidney failure, an increase of 32% since 2005. In 2010, an estimated 2.3–7.1 million people with end-stage kidney disease died without access to chronic dialysis. Additionally, each year, around 1.7 million people are thought to die from acute kidney injury. Therefore, an estimated 5–10 million people die annually from kidney disease (Couser et al., 2011).

In the Philippines, kidney disease, end-stage renal disease (ESRD), is already the 7th leading cause of death. In 2014, the Department of Health [DOH] said close to 23,000 Filipinos underwent dialysis due to kidney failure, nearly four times higher than the 4,000 cases recorded in 2004, or a 10 to 15 percent increase a year. According to the latest WHO data published in 2017, kidney disease deaths in the Philippines reached 22,772, or 3.68% of total deaths. The age-adjusted death rate is 32.20 per 100,000 of population ranks the Philippines number 22 globally. A lethargic lifestyle, wrong food choices, and inadequate sleep are key factors leading to diabetes and hypertension, resulting in kidney disease, the country's 7th leading cause of death (Manila Times Newspaper, 2014).

Chronic kidney disease is an umbrella term that describes kidney damage or a decrease in the glomerular filtration rate for three or more months. It is associated with decreased quality of life, increased health care expenditures, and premature death. Untreated chronic kidney disease can result in end-stage renal disease and necessitate renal replacement therapy such as dialysis or kidney transplantation (Thomas-Hawkins & Welch, 2005).

Before hemodialysis can start, the patient usually needs to have a particular blood vessel called an arteriovenous fistula (AV fistula) created in your arm. This blood vessel is created by connecting an artery to a vein. The operation to create the AV fistula is usually carried out around

four to eight weeks before hemodialysis begins. This allows the tissue and skin surrounding the fistula to heal. Most people need three hemodialysis sessions a week, with each session lasting around 4 hours. Two thin needles will be inserted into the AV fistula or graft and taped into place (Perry et al., 2007).

While dialysis can be life-saving, it is only a stop-gap. It is a long, tiring, physically and emotionally draining process that is very hard on the body. Dialysis can do only about 10% of the work that a functioning kidney can do and frequently causes other severe health problems such as anemia, infection, bone disease, heart disease, and nerve damage. The unintended consequence of being attached to a kidney machine each week, often for the rest of one's life, is horrific. Fifteen to 25% of dialysis patients die annually (Gifford-Jones, 2010).

When chronic kidney disease progresses to dialysis, diet plays a vital role in a patient's rehabilitative care. A well-balanced diet is necessary to stay fit as their kidneys are no longer functioning at their full capacity, i.e., to get rid of the waste products and fluid from their blood. Dialysis patients need to have the right amount of protein, calories, fluids, vitamins, and minerals each day.

When a person is diagnosed with a terminal illness, it is natural to enter a stage of denial and isolation. They may flat-out disbelieve what the doctor is telling them and seek out second and third opinions. They may demand a new set of tests, believing the results of the first ones to be false. Some people may even isolate themselves from their doctors and refuse to undergo any further medical treatment for a time (Hinkle, 2014).

A patient with end-stage renal disease may voice anger with the nurse's care instead of expressing a fear of dying. It is stressful to deal with an angry patient, or anger can represent rejection or disapproval of the nurse's care. Satisfying the needs of one angry patient often can fail to meet the priorities of other patients. When denial and anger do not have the intended outcome, such as a mistaken diagnosis or miracle cure, many people will move on to bargaining. Most people who enter the bargaining stage do so with their God. They may agree to live a good life, help the needy, never lie again, or do any number of good things if their higher power will only cure them of their illness (Hinkle, 2014).

People with chronic illnesses may feel depressed and hopeless, leading to non-compliance to the treatment regimen. Depression and lack of funds are common manifestations of the stress and independence conflicts associated with normal maturation. Depression may be the response to the death of a parent, relative, or friend, a breakup with a boyfriend or girlfriend, or due to chronic illnesses (Curtis & Tuzo, 2017).

Giving up old patterns and daring to look for new and untried solutions usually produces anxiety. The therapeutic team must support both patient and family by allaying anxiety and permitting new resolutions, which may take the pressure off the family, allow improvement in the patient's health, and minimize the destructive process (Leahey, M., 2013).

Patients' reactions to hospital anxiety can differ widely, from the angry executive's tendency to order the nursing family around like secretaries to the panicked young patient's attempts to enlist the nurse or parent's empathy, assistance, and perhaps pity. In such cases, it is essential to understand that the objective conditions perceived by the nursing staff may be totally at odds with the patient's subjective, anxious view (Wright & Leahey, 2013). People walk around with "bubbles" around their heads, constructed from their own biases, feelings, and expectations, making them perceive the world differently from those around them (Von Auexkull, 2015).

Hope significantly influences inpatient care as it is closely connected with nurses and nursing care. To provide good nursing care to the patient, nurses should have patience,

expectation, suffering, and adjust to the situation. Nurses cannot transform hope into the patient unless they have it. Nurses should have a high level of self-awareness and have hope in themselves to inspire hope in the patients. Moreover, nurses should create an interpersonal relationship with the patient through good communication. This will help the patient establish a feeling of comfort, care, trust, and confidence. Nurses have a vital role in generating positive expectations in patients. Hope is a positive concept that can make a difference in people's lives. In addition, it is also presented as a central concept of nursing practice because it is closely linked with patients' experience and improvement (Moore, 2005).

High-quality family communication is the backbone of the art and science of nursing. It has a significant impact on patient well-being and the quality and outcome of nursing care and is related to patients' family overall satisfaction with their care (Lorem et al., 2011).

Communication is considered the matrix of the helping relationship. The quality of the communication process, to a large extent, determines the caliber of the therapeutic alliance. Through the communication process, the nurse imparts information, corrects this information, helps the client sort out complicated feelings and emotional reactions to health issues, and assists the client in discussing options, reaching decisions, and selecting appropriate actions to meet current potential self-care needs. As such, the content and process of communication should be considered an essential dimension of every nursing action (Arnold & Boggs, 2012).

Nursing is therapeutic because it is a healing art, assisting an individual who is sick or needs health care. It can be viewed as an interpersonal process because it involves interaction between two or more individuals with a common goal. This common goal provides the incentive for the therapeutic process in which the nurse and patient respect each other as individuals, both of them learning and growing as a result of the interaction (George, 2011).

Each therapeutic encounter influences the nurse's and the patients' personal and professional development. As the nurse works with the patient to resolve problems in everyday life, the nurse practice becomes increasingly more effective. Thus, the kind of person, the nurse, is and becomes directly influences her skill in the therapeutic, interpersonal relationship. The nurse interacting with the patient has a person has a significant impact on the patients' well-being and the quality and outcome of nursing care (Masters, 2012).

Nursing is one of the most stressful professions due to the emotional nature of patient demands, long working hours, and inter-professional and interpersonal conflicts. Nurses consistently report higher stress compared to other health professionals. This affects job satisfaction while invoking feelings of inadequacy which can lead to burnout and compromised well-being of nurses. Such effects affect productivity and performance (William & Smith, 2013).

As a nurse, there are many factors that can prove stressful. In a field that demands a lot from its employees, staying on top of their health is essential to ensuring work performance is at its peak. More importantly, leading a healthy lifestyle is a crucial factor in maintaining a happy and fulfilling life. In order to do so, not only must one maintain physical health but also a sound mind and spirit. According to the American Nurses Association [ANA], a healthy nurse actively focuses on creating and maintaining a balance and synergy of physical, intellectual, emotional, social, spiritual, personal, and professional well-being. A healthy nurse lives life to the most total capacity, across the wellness/illness continuum, as they become stronger role models, advocates, and educators, personally, for their families, their communities and work environments, and ultimately for their patients (Faleti, 2017).

Nursing competency of some quality requires professional management and good coping strategies. Professional management in nursing care embraces the demands of the relationship and

the demands of the work and, in addition, the ability of distanced reflection. There can be two demands upon professional management in nursing care. The first amounts to accepting that the relationship with the patient is not equal and mutual. A professional nurse is deemed to include the ability to interpret patients' needs, those needs that are expressed more or less clearly. These demand physical as well as mental presence. A prerequisite here is the expertise of the technical aspects of the work. With such expertise, the nurse does not have to focus on their own acting and can instead devote their full attention to the patient. Second, a professional management in nursing care involves the ability to be empathic and to establish contact with the patient emotionally, but also to maintain an emotional distance when this is called for. For example, the patient's anxiety should not lead to anxiety in the nursing staff. Being able to shift between closeness and an objective attitude towards the patient requires well-developed ego functions and good coping strategies (Srinivasan & Jebaseelan, 2014).

Hemodialysis nurses play a significant role in preventing complications and infection during the process of treatment. They review a patient's laboratory results before dialysis to make sure fluid and electrolyte balances are within acceptable limits, weigh the patient before and after the procedure to make sure that the right amount of fluid is returned, and ensure that patients don't take medications that could cause problems during dialysis. Blood pressure medications, for example, can cause blood pressure, which lowers during treatment in any case, to drop to dangerous levels. After dialysis, hemodialysis nurses watch for signs of a severe complication called disequilibrium syndrome, neurological symptoms associated with this complication include confusion, a change in the level of consciousness, or sudden and severe headaches. Nurses must report these changes immediately to the attending physician (Perkins, 2011).

Patients who come to the dialysis clinic for the first time are understandably anxious and upset about needing dialysis, a procedure that will dominate their life until they get a new kidney. Teaching patients what to expect during dialysis, walking them through the process, explaining how much time dialysis will take and answering any questions is part of the hemodialysis nurse's job (Perkins, 2011).

A study about improving the nurse-patient relationship, a multi-faceted approach, concluded that an excellent nurse-patient relationship is essential to meet the patient's clinical, psychological, and social needs to optimize treatment. Effective patient education is vital for meeting patients' needs and increasing treatment compliance. Moreover, optimal treatment of patients requires a multidisciplinary approach to allow early identification and treatment of associated co-morbidities (Jenkins et al., 2002).

Filipino nurses are skilled, efficient, caring, and compassionate. They are highly prized around the world for these outstanding qualities. They speak English, are trained in American-caliber medicine, are hardworking, and they come from a culture where families take care of their own sick and aging relatives. No wonder they have become a mainstay of many hospitals and nursing homes in the US and other parts of the world. They are recruited in their homeland with perks like free airfare. Some are offered thousands of dollars in bonuses to relocate. Filipino nurses made up fifty percent of all foreign nurses. Today, two hundred thousand nurses in the Philippines went to the USA. Outside the US, Saudi Arabia and other countries in the Middle East emerged as popular destinations for nurses. For example, Filipino nurses in the US earn fifteen times more than those working in the Philippines. Career growth and government bureaucracies are some significant factors that will push Filipino nurses to work abroad (Ardenio, 2018).

Knowledge and beliefs about medicines were essential patient-specific factors potentially impeding adherence behavior. Prioritization of medicines due to poor understanding, perceived necessity, and concerns was a significant reason for nonadherence. Socio-economic factors such as access to medicines and their affordability also raised concerns that hindered adherence. Healthcare professionals may routinely instigate dialogs and encourage patients to volunteer information concerning their current medicines, readiness to start new therapy, changes with dose or dosage requirements, and side-effects or safety concerns they might be dealing with (Ghimire et al., 2017).

DOMAIN OF INQUIRY

The study explored the lived experience of nurses in the care of patients in a hemodialysis unit. Specifically, the study sought to answer the issues: (1) pressing issues do the informants encounter in the nursing care of hemodialysis patients; (2) how informants manage these issues; and 3) how the informants respond to these pressing issues.

METHODOLOGY

This section discusses the research design, research environment, research informants, research instruments, data analysis steps, and ethical considerations.

Research Design

The researcher utilized a qualitative research design. This type of design uses a phenomenological design and examines human experiences through descriptions provided by the informants. The purpose of descriptive phenomenological research is to describe experiences as they are lived.

Phenomenology is an approach to thinking about people's life experiences and what they mean. The phenomenological researcher asks the following questions: What is the essence of this phenomenon experienced by these people? Or, what is the meaning of the phenomenon to those who experience it? (Barkway, 2001). Phenomena are the world of experience. Phenomena occur only when a person experiences them. An experience is considered unique to the individual (Johnson, 2000).

Research Environment

The study was conducted in a tertiary hospital with a 140-bed capacity. The hospital offers a wide range of services, such as emergency room, intensive care unit, medical-surgical ward, obstetric ward, operating room, out-patient department, pediatric ward, pharmacy department, radiology department, and renal department. The institution has a renal unit located on the third floor of the building. The renal unit provides comprehensive renal services for patients with chronic or acute renal failure on an in-patient and out-patient basis. It has twenty chairs, a total of twenty-one (21) hemodialysis machines. One hemodialysis machine serves as back-up, three for isolation which caters to patients with blood-borne infectious diseases such as hepatitis B and hepatitis C, and airborne precautions. It caters to two shifts in a day, the first shift starts at 7 to 8 a.m., and the second shift starts from 11 a.m. to noon, providing comprehensive hemodialysis

treatment. The unit offers patients the latest technology in a spacious, modern environment and is provided with emergency equipment such as cardiac monitors emergency carts for seriously ill - patients. It also facilitates continued education of dialysis patients regarding their disease, dietary advice with the help of licensed nutritionists, and facilitates laboratory workshops in the monitoring of their disease.

Research Informants

There were eight informants of this study. They were selected with the following inclusion criteria: work as renal nurses and have direct care to hemodialysis patients and are willing to share their experiences as renal nurses caring for hemodialysis patients.

Research Instrument

The researcher utilized an interview guide that tackles healthier care, longer lives, and issues on nursing care of hemodialysis patients. The researcher used an explorative type of questions about the different life challenges, difficulties, reactions of the informants. These questions helped the researcher explore more profound with the hope of understanding the informants. The goal was to determine themes based on their responses.

Data Analysis

This study aimed to convey the informants' different issues, life challenges, difficulties, and reactions using Colaizzi's descriptive phenomenological data analysis strategy in nursing research. The process of Colaizzi is used to assist in extracting, organizing, and analyzing data.

Ethical Considerations

Hospital and informed consent from each informant was sought prior to the interview. The following ethical principles have guided this study: (1) autonomy, right to know, and withdrawal was respected by providing the informants with all information pertinent to the study and making them understand that their participation is entirely voluntary and had the right to withdraw any time; (2) non-maleficence were observed by discussing to them the risks of discomforts; and (3) privacy and confidentiality were guaranteed by storing all data in a secured place, and all information acquired from the informants were treated non-identifiable and in a confidential manner.

RESULTS AND DISCUSSIONS

This section presents the emerging themes from the series of interviews with the informants about their different life issues, challenges, difficulties, reactions of the renal nurses upon rendering care to their hemodialysis patients. A transcript of data about the face-to-face interview was written. A total of six emergent themes were identified.

Theme 1. A Tough Journey to Medication Compliance. When nurses were asked about the issues they encountered as they cared with their hemodialysis patients, two informants stated similar reports that their patients are non-compliant regarding medication intake despite telling them the importance of medications. Informants 1 and 4 said that:

“For me Ma’am Joy, the issue that I encountered as a nurse Ma’am is non-compliance of my patients in taking their medication. I handle it through encouraging and reorienting the patients on how important compliance is and by trying my best to provide what I can provide as a nurse. By trying my best to provide what I can provide as a nurse and by always being positive, just be chill in dealing all the issues.”

“Well Ma’am, taking care of HD patients was very challenging, one of the challenges that I encountered was their non-compliance of their maintenance medication which was too many, even if you tell them the importance of compliance, still there are patients who had difficulty in complying. I managed it through explaining the advantages and importance of taking the medications along with following the limitations of fluids at the same time. My colleagues especially my senior nurses help me in explaining to patients. How difficult it must be for them in terms of adhering to their medications which are too many.”

When the informants were asked about how they managed the issues on non-compliance of patients on their medication, they emphasized the importance of providing health teachings to their patients to aid compliance. Understanding the risk and benefits will encourage patients to adhere to proper medication intake. Through communication and health education, the nurse imparts information, corrects the wrongdoings, and helps the client sort out complicated feelings, issues, and hardship and the root of non-compliance.

Nurses who were always with the patient taking good care of them empathized with the difficulty of their patients in adhering to their medications. However, they chose to be positive in dealing with it.

Theme 2. Difficulty in Changing Old Habits. During the interview, the informants identified difficulty changing their patients' old habits as one of the issues they encountered. Informants 1, 3,4,5, and 8 uttered that:

“For me Ma’am Joy, the issue that I encountered as a nurse is patients not following the prescribed diet given and knowledge deficit on the part of the patient.”

“Ma’am Joy, it is very important to monitor the fluid intake of our patients, and we can identify if the patient is compliant with the fluid limitation because before and after dialysis we weigh the patient, and I notice that it is really hard for patients to comply with the fluid limitations. First due to lots of maintenance medications to take. Second, due to hot weather, that makes them thirsty from now and then. I give health teachings to my patients in fluid limitations and its importance. With these issues I had encountered Ma’am, I provide support to patients and their families so that they can easily deal with and accept changes in their lifestyle because I know Ma’am, it is very difficult for them Ma’am facing lots of changes Ma’am Joy, I know it’s really hard for them.”

“Well Ma’am, taking care of HD patients is very challenging, one of the challenges that I encountered was that they had a limitation of fluid intake in a day specifically 600 cc/day, and even if you tell them the importance of compliance still there are patients who had difficulty in complying.”

It is difficult to undergo hemodialysis, it deprives you from eating foods you like. This patient of mine really needs to modify his lifestyle and I always told him the importance of lifestyle modification and I can feel how hard it is for him. I managed it through explaining the advantages and importance of taking the medications along with following the limitations of fluids at the same time. I feel pity for them thinking how hard for them to limit their fluid intake but it does not affect my care instead it made me strive hard to care for them more.”

“Some patients are still in denial, and even if we discuss to them their condition they are close minded and the more they will not follow the prescribed diet. Our patients had difficulty in changing their lifestyle especially for those newly diagnosed patients.”

“I manage it by recognizing each problem. These problems really do exist, so we can do something about it. By doing my job as a nurse, continue taking care of them. I know it is not easy to modify their lifestyle but I think it is really important for a nurse and a patient to work together. I

manage it by giving health teachings and making sure to give time to talk to my patient despite of busy schedules like to avoid processed foods, foods rich in potassium, fatty and salty foods.”

Lifestyle is a part of life that most people control, and such behaviors are often changeable. Five (5) informants had noticed the difficulty of their patients in modifying their lifestyle. It is common for individuals to have difficulties changing the old habits they used to have. However, the nurses’ responsibility is to make their patients understand the importance of modifying their lifestyles.

The informants noted the difficulty of their patients in modifying their lifestyles. For patients undergoing hemodialysis, it is crucial to modify their lifestyle by following their prescribed diet and following the fluid limitations. Although hemodialysis removes fluid, however, there is a limit on how much fluid can be safely removed during a dialysis session. To address these issues, the informants understood the importance of providing health education to their patients by talking to them during their hemodialysis sessions and showing support and encouragement to their patients and their family members.

Theme 3. Deteriorating Patient’s Condition due to Financial Pressures. As we go along with the interview, three (3) of the informants reported that one of the issues they had encountered had something to do with the financial capabilities of their patients. Informants 1, 6, and 8 stated that:

“In terms of financial problems with the patients, as much as we want to help, but it would be difficult to deal with it, we just inform them regarding requirements for PCSO and DSWD.”

“Patient are not compliant due to financial constraint. It would be difficult for us to let them understand the importance of compliance because they also don’t have enough funds for their regular treatment and for their medications and then days after they will be readmitted and deteriorating.”

“Another issue is the financial problems of the patients leading to non-adherence to dialysis treatment. Although we have PCSO, DSWD, and Philhealth, some of our patients will really tell us that it is hard for them to comply with their 3x in a week dialysis because of their financial problems.”

The majority of the informants concluded that many of their patients could not attend their scheduled hemodialysis due to financial problems that may eventually deteriorate the patient's health condition. Hemodialysis is a life-long treatment and requires solid financial support.

Theme 4. A Difficult Entry to Hemodialysis World. There are instances in their care of their patients where they had difficulty maintaining hemodialysis access. Part of the responsibility of the hemodialysis nurse is to make sure that the patients' arteriovenous fistula is in good condition. To achieve this, nurses should inform the patients on how to take good care of their arteriovenous fistula.

Throughout the interview, the informants were also asked how they managed those times they encountered problems in hemodialysis access. The informants were asked about the pressing issues they encountered. Informants 2 and 7 stated that:

“Some of our patient’s arteriovenous fistula Ma’am kay gagmay man ug ugat, isahay madugay me gamay ana and maglisod kay need man siya emake sure na tarong jud pagtusok pra walay problems sa whole duration sa iya dialysis kay basin makailis unya ug blood lines if magclot. (Some of our patients have smaller veins, and it will take time for us, since we need to make sure to maintain

a functional fistula to avoid complications such as blood clots for the whole hemodialysis duration. Through the help of my colleagues. They help us in dealing our patient, our senior nurses help us with those patients that we have problems in access. For patients nga gagmay ug ugat and lisod nga arteriovenous fistula, I always emphasize na at home they will continue to use stress ball and make sure na naa thrill ma feel sa ila site to make sure na okay pa ila site. Through the help of my colleagues, they help us in dealing with our patient. Our senior nurses help us with those patients that we have problems in access. For patients who have difficult arteriovenous fistula access, I always emphasize to use stress ball and make sure there is presence of thrill in their fistula to make sure that their access are still functional. With the patients having difficult cannula, I pity them and feel worried for them, because I know it is not easy if ever there will be problems with their arteriovenous fistula or catheter or raft, it would be an additional burden to them. I seek help with my colleagues, if there will be problems with cannulation.”

“We have patients who have delicate arteriovenous fistula. For patients like this, we make sure to assess the site always and during the whole course of dialysis especially the patients will have to move when they need to eat, drink water, or reposition making themselves comfortable. I managed it through prioritization and time management. I also encourage the patient to use stress balls to help promote circulation and as a form of exercise to help their delicate arteriovenous fistula to develop. As a nurse, patients safety is really our priority and proper training and seminars will be a great help for us especially in cannulation.”

The informant’s responses concluded that proper health education on arteriovenous fistula care to the patients is essential to avoid problems on hemodialysis access. Nurses must understand the dynamic of prioritization and time management, and if the need arises, they can always seek help from their colleagues.

The informants understood the difficulty that their patients might be experiencing if problems with hemodialysis access occurred. With this, they emphasized the great help of proper training and seminars to avoid problems regarding an arteriovenous fistula.

Theme 5. Infection Dilemma. During the face-to-face interview, the informants were asked about the pressing issues they encountered, and preventing infection was one of the highlights. Informants 2 and 7 shared that:

“For patients with internal jugular catheter and permanent catheter, it is really important to emphasize proper handling and caring of the catheter to avoid infection. “We make sure to explain to patients the importance of hygiene and dressing to avoid infection. In preventing infection, I see to it that they will understand the health teachings given to them coz I know it is hard for patients especially in maintaining hygiene making sure their catheter won’t get wet.”

“For patients with internal jugular catheter, we need to tell them the importance of avoiding infection through proper dressing. During dressing, at the same time we tell or teach them to avoid the catheter from getting wet. In terms of patients with catheter, how difficult it must be for them making sure the catheter won’t get wet to prevent infection, nurses education is indeed very important.”

The informants' responses concluded that patients with the internal jugular catheter are at risk of acquiring infection; thus, nurses need to highlight education to the patient in terms of proper handling or care to their internal jugular catheters when the informants were asked about how they manage the issue in terms of preventing infection.

The informants understood the difficulty of their patients in taking care of their internal jugular catheter and avoiding them from getting wet. In place of this, they make sure that their patients understand the health teachings to prevent infection.

Theme 6. Patient's Experiences through the Nurses Lens. Throughout the interview, as the informants mentioned many issues they encountered upon taking care of their patients, they also highlighted that these issues impacted them as nurses. Informant 1, 2,3,4,5, 6,7, and 8 said:

“Working as a renal nurse is like a huge challenge you need to overcome like extending your patience, your emotions, and your time but it made me a more versatile and competent hemodialysis nurse.”

“Patients’ experiences made me strive to care for them more.”

“I am more grateful that I become a nurse to see the beauty of being a nurse. I tried to be positive and see the goodness in being a nurse. (It made me value my health more seeing our patients on dialysis.”

“I think it made me become a more positive person and see the value of being a nurse.”

“The patient’s experiences enlightened me about the value of good health, to take more care of ourselves and not to take health issues lightly.”

“The patient’s experiences affected me by making me realized the importance of staying healthy away from illnesses and diseases.”

“I learn to value my health more. To give importance to my health as a nurse.”

“I realized the importance of staying healthy. To eat healthy foods.”

During the face-to-face interview, when asked about how the patient's experience affected them, most of the nurses remained positive and became motivated despite all the issues and difficulties they encountered. During the interview, five informants stated that the patient's experiences made them realize the importance of living a healthier life. The informants had faced many issues upon taking care of their patients. Seeing their patient's sufferings, difficulties, and problems due to their health condition, made them realize the importance of staying healthy, taking good care of themselves, and eating healthy foods.

Analysis of Data

Theme 1: A Tough Journey to Medication Compliance. Non- compliance in patients receiving hemodialysis has become an essential issue, leading to complications and even death. Low income, cultural factors, or a lack of health education and general education contributed to medication non-compliance in poor and racial or ethnic minority populations (Jindal, 2000).

One of the nurses' responsibilities is to remind and educate the patient on the importance of taking their prescribed medication. Understanding and proper communication with the nurses to their patients can be considered a tool towards medication adherence.

Central to Bandura's work is the self-efficacy model, a known predictor of health behavior in patients with chronic medical conditions and has influenced adherence to medications. Self-efficacy is an individual's belief in the ability to continue taking their medications despite the various challenges they may encounter. Patients who are ill will choose to adhere to their medication if they believe that doing so will result in their getting better and experiencing increased quality of life (Bandura, 2004).

Agreeing with Bandura's theory, behavior change is said to occur due to the person's belief about how capable they are in performing behaviors that would lead to the desired outcome. For patients to attain medication compliance, nurses should be aware of the capabilities and behaviors of their patients in taking their medications. Aside from imparting knowledge, nurses must help their patients enhance their capabilities in taking their medication on time.

Theme 2: Difficulty in Changing Old Habits. Chronic renal failure has mutual effects on individuals' physical, psychological, and functional status, which causes types of deprivation and

lifestyle changes. Health status and quality of life are essential concepts for patients with chronic kidney disease and those undergoing hemodialysis. Therefore, there is an urgent need to highlight the importance of modifiable risk factors as a basis for treatment strategies to prevent chronic renal failure disease progression, which should include expanding our current knowledge from a healthy lifestyle (De Francisco et al., 2005).

Patients with chronic disease are often in denial and are emotionally unstable. In times like this, nurses must be with the patient and give comfort and support. Communicating with the patient is a big help for nurses to assess the health condition of their patients. Through this, nurses will help the patient improve their quality of life.

Health educators, in particular nurses, must understand that greater than fifty percent of patients are health care illiterate. This has nothing to do with their ability to read and write; but rather their inability to understand health care information and what they need to do with that information health promotion by nurses can lead to many positive health outcomes, including adherence, quality of life, patients' knowledge of their illness and self-management (Keleher et al., 2009).

Theme 3: Deteriorating Patient's Condition due to Financial Pressures. A study on non-compliance among chronic hemodialysis patients and its impact on patient outcomes concluded that non-adherence to dialysis treatment is common among hemodialysis patients and associated with significant morbidity. At least fifty percent of hemodialysis patients are believed to be non-adherent to some part of their treatment. Non-adherence is highly prevalent among chronic hemodialysis patients and is associated with poor quality of life and lack of financial support (Ibrahim et al., 2015).

Last June 2015, Philippine Health Insurance Corporation (PhilHealth) announced that coverage for hemodialysis is expanded from 45 to 90 sessions per year to help lessen the financial burden of its members undergoing the said treatment. The PhilHealth Board of Directors approved the expansion due to the growing incidence of kidney diseases in the country and responded to the increasing clamor from different stakeholders to increase PhilHealth coverage for hemodialysis. PhilHealth records show that in 2014, hemodialysis posted the most number of filed claims among other procedures (Philhealth, 2015).

Dialysis sessions covered by the Philippine Health Insurance Corporation (PhilHealth) were lowered from P4,000 to P2,600. The P2,600 per session shall include the P2,250 fee, P350 professional fee, dialysis machine use, drugs and medicines, supplies, and others. In 2014, PhilHealth records show that hemodialysis posted the most filed claims among procedures (Naval, 2015).

Caring integrates adaptive methods that help the family through the healing process and teach the nurse methods to help the family in other aspects. This may include emotions and physical aspects through validating, informing, and supporting participants, giving feedback, and helping to focus and generate alternatives. During the interview, the informants noticed that frequent absences or non-adherence to the treatment regimen is due to financial incapacity leading to patient deterioration. To aid their patients financially, they provided them with other options or alternatives, such as informing them of the different requirements needed for PCSO, DSWD, and other organizations. Through this, the nurses will reduce non-adherence and may eventually decrease the chances of worsening the patient's condition.

Theme 4: A Difficult Entry to Hemodialysis World. Good vascular access translates into an efficient hemodialysis procedure. The creation of adequate vascular access does not always result in permanent access availability because of numerous complications. Difficulties in maintaining vascular access are the main challenge for nephrologists and nurses operating in dialysis units. Proper vascular access maintenance involves good cooperation between medical care personnel and patients. A complete understanding of the etiology of access failure requires an evaluation of numerous factors, including patient demographics, fistula type, and patient compliance with fistula care. A significant cause of vascular access failure is acute and chronic thrombosis. For this reason, to prevent thrombotic events of vascular access, it is crucial to monitor biomarkers of coagulation activation. Also, exercising the fistula arm after the fistula is created may help improve muscle tone and make the vein more stable and more accessible to needle. Thrills indicate that the fistula is working (Milburn et al., 2011).

Agreeing to the article, the constant use of stress balls and checking the presence of thrill to the patient's hemodialysis site will be a boundless help in maintaining functional hemodialysis access. Providing proper education to each patient may decrease the possibility of hospitalization due to complications brought by dysfunctional hemodialysis access.

A study concluded that a functional arteriovenous fistula is a significant determinant of successful hemodialysis; however, arteriovenous fistulas may be a risk factor for hospitalization in dialysis patients. Knowledge about the potential complications should contribute to their timely detection and allow measures to be taken to prevent deleterious consequences that range from loss of vascular access to severe morbidity and may ultimately be fatal. Therefore, arteriovenous fistula care should be a priority for patients and the entire professional team involved in the treatment of dialysis patients (Stolic, 2012).

Instead of the informant's responses, patient safety is their priority. Loss of vascular access may lead to severe problems and additional burden to the patient and their family. As per the informants, to avoid complications, seeking help from their colleagues is a great help for them when encountering such a problem.

Theme 5: Infection Dilemma. According to Swanson's caring theory, caring is a nurturing way of relating to a valued other toward whom one feels a personal sense of commitment and responsibility. In this theory, the ultimate goal of nurse caring is to enable clients to achieve well-being through providing concrete caring action, behaviors, and therapeutic interventions.

Nurses demonstrating they care about patients is essential to patient well-being through caring for them through clinical activities such as administering medications, wound dressing, preventing infection, and giving health education (Swanson, 2013).

Supporting Swanson's theory, two informants specified that preventing infection is a priority in nursing care. Infection is the most common cause of hospitalization among hemodialysis patients. Hemodialysis patients have weakened immune systems, which increases their risk of acquiring infection. However, the informants noticed the difficulty of their patients in caring for their catheters at home. To manage this, comprehensive health teachings about catheter care were provided by the informants to their patients in order to avoid infection. Remember that patients who undergo dialysis treatment have an increased risk of getting an infection because the hemodialysis process requires frequent use of catheters or insertion of needles to access the bloodstream.

A study on infection control in hemodialysis units concluded that hemodialysis patients and the dialysis staff are vulnerable to contracting healthcare-associated infections due to frequent

and prolonged exposure to many possible contaminants in the dialysis environment. The extracorporeal nature of the therapy, the associated common environmental conditions, and the immune-compromised status of hemodialysis patients are major predisposing factors (Karkar et al., 2014).

Theme 6: Patient's Experiences through the Nurses Lens. A dialysis nurse oversees and administers dialysis to patients from start to finish. They check patients' vital signs and evaluate their response to the treatment and various assistive medications. Dialysis treatments are exact procedures, so nephrology nurses must be highly detail-oriented (Whitman, 2018). The informants proved that nurses are known to be patient-centered. They render care with the primary purpose of improving the quality of life of their patients. Nephrology nurses is a demanding yet fulfilling job. They can motivate and help the patient make life changes that work for them and achieve milestones. They are given the privilege and delicate responsibility of caring the chronically ill dying patient.

In general, nurses are extremely caring and generous individuals. Because dialysis is an involved, lengthy, and detail-oriented process, dialysis nurses must be even more dedicated. However, they can also build relationships with their patients and see accurate results. While every nursing job is rewarding, being a dialysis nurse provides a special opportunity to make a lasting difference in a patient's life (Whitman, 2018).

Staying healthy helps nurses to provide better care for their patients as well as for themselves. Having the most direct contact with patients and their families, being with them for longer hours, and providing nursing care is vital for staying healthy.

IMPLICATIONS FOR PRACTICE

Nursing Practice. This study may provide insights to nurses on dealing with different issues, challenges, and hardships leading to healthier and longer lives. As nurses render care to their patients, they will also value their health more, balance work from life issues, gain knowledge, and help them shape a better future. It will also motivate the institution to improve the quality of care rendered by their nurse. Hospitals or any health care institutions monitor patient satisfaction to evaluate and improve the quality of care given by their nurses. Since nurses spend much time with patients, they significantly impact patient satisfaction. To improve patient experiences of the quality of care, nurses need to know what factors within the nursing work environment are of influence. Knowing the pressing issues of nurses and ways to lead healthier care will encourage the nurses and the institution itself to develop ways to improve hemodialysis care.

Nursing Education. This study will serve as a guide for nurses, students, and faculty dealing with hemodialysis patients in the area. Nurses must have much knowledge and be updated to the new information towards the nursing care of hemodialysis patients. Dialysis nurses use their expertise in kidney disease and treatment to make each dialysis session safe, efficient, and effective.

Nursing Research. This study encourages other researchers to conduct further studies on this topic. Healthier care, longer lives: Issues on nursing care of hemodialysis patients. To guide the nurses on how to provide quality care and live a healthier life amidst the issues they run into.

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ETHNOGRAPHIC ANALYSIS OF THE ABUNDANT RESOURCES IN THE MUNICIPALITY OF TUBURAN, CEBU AND THE LOCAL TOURISM CHALLENGES

Monifel S. Galagar

University of Cebu Graduate School
Cebu City, Philippines

Grayfield T. Bajao

<https://orcid.org/0000-0002-8714-6015>
University of Cebu
Cebu City, Philippines

ABSTRACT

Part of the Millenium Development Goal (MDG) boosts countryside development. In the Philippines, being a developing economy, one of the key drivers is rural eco and agro-tourism. Hence, this study explored the available resources in the Municipality of Tuburan, especially the flora as an essential tourism commodity, and the challenges in attaining local tourism growth. The study used the ethnography method. The data collection tool was the researcher-designed interview guide. The study was conducted in Tuburan, Cebu, with twenty (20) informants. Thematic analysis was applied for data analysis. Coffee, banana, cacao, coconut, and corn were the major agricultural floras in Tuburan, Cebu, and coffee was the significant floras that gave a distinct identity of the municipality in tourism. Moreover, agricultural floras greatly benefit the community by opening job opportunities, empowering the people, building social relationships, and uplifting morale. Lastly, the significant challenges encountered by the informants in promoting tourism were poor facilities and services in the coffee farms, transportation, communication, and manpower.

Keywords – Eco-Agrotourism, rural resources, ethnography, Cebu, Philippines

INTRODUCTION

Tourism nowadays is an important industry that is growing. Its activities have been diversified towards eco and rural tourism. This has created opportunities that make the new demands from tourists coincide with rural communities' need for economic development (Neves, 2006).

The promotion of tourism and leisure service industries as a regional growth driver, particularly in peripheral regions, may ignore specific underlying industry characteristics. Often tourism features low wages and unskilled labor, lessening income-related demand effects, and, further, militating against the development of a highly-skilled workforce. Moreover, external ownership of large tourism concerns, together with underdeveloped local tourism infrastructure, can limit the contribution of new tourism activity to regional growth prospects (Jones & Munday, 2001).

The Philippines is indisputably a perfect destination for the tourism industry to flourish due to its abundant natural resources and fertile lands. Moreover, as an archipelago, it is surrounded by waters providing beaches comparable and commendable to the world. In fact, with these gifts bestowed to our land, the tourism industry has significantly contributed to our country's booming economy.

However, where tourism can be identified as a primary economic driver, this may cause hostility in areas formerly dependent upon agricultural (or industrial) production (Smith & Krannich, 1997). It may also be the case that more urban areas that identify tourism and visitation as development drivers risk prioritizing visitors at the expense of residents to pursue an often ill-defined economic goal (Jones, 2001).

Based on everyday observations, some potential tourist areas in the country are still behind due to some encumbrances that should be heeded by the government, particularly the local government unit. A primary challenge of local governance, both today and in decades ahead, is to steer increasingly external, global forces on local development to achieve the shared vision of the local population. In cities, towns, and villages throughout the world, the primary responsibility for this steering process rests with the institution of local government and its various local authorities.

According to Jone and Munday (2001), recognizing tourism and leisure as a fast-growing industry has led to its identification as a potential driver of regeneration in economically disadvantaged localities. Unfortunately, the dynamics of the sector are not always well understood, such that developing a support policy focused upon tourism can be problematic. In the northwest part of Cebu, particularly in the Municipality of Tuburan, coffee, cacao, and banana are the local floras that are found to be potential factors contributing to the continual development of its local tourism industry. Hence, this investigation aims to determine the existing local resources and the challenges hindering the growth of countryside tourism.

FRAMEWORK

This study is anchored in Gray's travel motivation theory, which states that one can ascribe two vital and well-defined purposes for pleasure travel, wanderlust and sun lust. Wanderlust refers to the essential trait in human nature which causes some individuals to want to leave things with which they are familiar and to go and see at first hand different existing cultures and places, or the relics of past cultures in places famous for their historical associations, ruins, and monuments. Sunlust is primarily focused on attractiveness and pulled off the sun, sand, and sea. In contrast to wanderlust, the sun lust generates a particular type of travel that depends on the existence of different or better amenities for a specific purpose than are available locally. Wanderlust may be expected to be primarily international than sun lust travel (Verma, 2104).

Verma (2014) added that Gray's travel motivation theory poses two main motives for travel. First is the desire to go from a known to an unknown place called the wanderlust. The second is the sun lust which generates a trip to a place that can provide the traveler with specific facilities that do not exist in his residence. Recreation, pleasure, new experiences, cultural interest, and shoring are some of the motives determining their travel choices.

Motivation is a multidimensional concept in which tourists have many needs and desire varied experiences in a destination. Push and pull motivation is a common way of approaching this issue in tourism behavior research. Further, it is considered necessary in destination

marketing to understand the relationship between push and pull motivations of a potential tourist (Baloglu & Uysal, 1996). The relationship between push and pull factors is linear, where demographic variables have been found to affect the strength of the correlations (Kim et al., 2003; Uysal & Jurowski, 1994).

Thus, marketers and destination agents in tourism should consider that most successful products and services respond best to the string of needs within a given market segment and give more marketing efforts to corresponding a destination's significant attributes to the tourists' varied psychological desires.

Parsons' theory of culture and the social structure stipulated that culture is integral to society. For him, culture includes the language of a society, symbols such as flags, beliefs about right and wrong, and things such as art and literature of a society. Culture is distinguished from the physical environment and the individual personality (Haralambos & Holborn, 2000).

The theory of culture served to reconcile the equilibrium of social systems with the fact that actors can interconnect their actions only by externalizing their mental states (for instance, their motivation to act in a certain way or their emotionality and need-dispositions) with the help of symbols in order to grant their co-actors the opportunity to do the same. Symbols both express and communicate what other actors may expect in a given action situation and encourage or stimulate them to express their attitudes in a situation. Such symbolizations can render the inevitable contingency of mutual gratification less uncertain and increase the possibility of mutually undertaking projected actions.

Besculides et al. (2002) said that the cultural and social as an aspect of sustainability might be supported by tourism development by granting a change of declining traditional industries appealing infrastructure development promoting pride referring to culture and community, fostering cultural acceptance amongst visitors, keeping cultural heritage, fostering cross-institutional acceptance and bring into existence educational favorable circumstances.

Mathieson and Wall (1982) opined that tourism is the temporary movement of people to destinations outside their usual places of work and residence, the activities undertaken during their stay in those destinations, and the facilities created to cater to their needs. Micintosh and Goeldner (1986) viewed tourism as the sum of the phenomena and relationships arising from the interaction of tourists, business suppliers, host governments, and host communities in the process of attracting and hosting these tourists and other visitors.

Tourism promotion is an essential source of information for potential tourists. It engages people in the decision-making of the destination they would like to travel to. In this digital age, greater attention has been given to the development of tourism through tourism promotion, and this has been utilized by most countries in the world, which has encouraged the necessary development of the tourism sector. Since tourism involves the most incredible people movement and is one of the most significant economic activities globally, it has become a popular focus of research (Salim et al., 2012).

Ecotourism is a sub-component of the field of sustainable tourism. Ecotourism's perceived potential as an effective tool for sustainable development is the main reason why developing countries are now embracing and including it in their economic development and conservation strategies. Ecotourism, as alternative tourism, involves visiting natural areas to learn, study, or carry out environmentally friendly activities, that is tourism based on the nature experience, which enables the economic and social development of local communities. It focuses primarily on experiencing and learning about nature, its landscape, flora, fauna and habitats, and cultural artifacts from the locality (Kiper, 2011).

Ecotourism is a form of nature-based tourism in the marketplace, but it has also been formulated and studied as a sustainable development tool by non-governmental organizations (NGOs). Therefore, the term ecotourism refers, on the one hand, to a concept under a set of principles, and on the other hand, to a specific market segment (Wood, 2002).

According to Buckley (2008), ecotourism is widely recognized for its positive impact on the environment. Ecotourism operators and tourism lobbyists argue that ecotourism has contributed to the local communities' economic, social, and cultural development by conserving and supporting protected areas.

As the fastest-growing sector of the tourism industry, ecotourism offers tourism companies and third-world destinations alike the prospect of capitalizing on the comparative advantage of these nations in terms of unspoiled natural environments. The opportunity for these countries to enhance their development potential by harnessing their natural resources without, at the same time, destroying them cannot be denied. However, what is essential is recognizing that, without adequate understanding of underlying factors and careful planning and management, ecotourism may include unsustainable aspects (Wunder, 2013).

Ecotourism offers benefits for residents, conservation support, low-scale development, low visitor numbers, and educational experiences. Ecotourism has attracted increasing attention in recent years, not only as an alternative to mass tourism but as a means of economic development and environmental conservation (Schaller, 2010).

In order to be successful at and sustain ecotourism activities in which local people and the natural environment are at the center, first, it is needed to know better the values of the people and the social environment. This demonstrates that opening an area to ecotourism requires to begin with the local organization and local people's education (May 2011).

Ecotourism operates for one or more eco-friendly alternatives for the economical use of natural resources compared with mining, hunting, farming, and so on (Li, 2006). Ecotourism promotes an enhanced appreciation of natural environments and environmental education by exposing visitors and locals to nature and conservation (Bob et al., 2008).

Ecotourism has the potential to seriously impact local communities, mainly due to the tendency of ecotourists to have a greater interest in the culture and nature of the areas they visit, as compared to mass tourists (McMinn, 1997). Grzywacz (2014) said that many tourists have different destination demands. Tourist typologies are descriptions of distinctive forms of tourist consumer behavior. They reflect different motivations, interests, and travel styles on the part of a tourist. Most typologies attempt to group tourists according to their preferences regarding destinations, activities while on holidays, independent travel versus package holidays. This travel motivation theory on typologies divides the tourists into different groups to find out what the specific tourist wants. These are the organized mass tourists, the least adventurous tourists, the individual mass tourists similar to organized mass tourists. However, this typology only utilizes the facilities made available by the tour operator, the explorer where this type of tourist arranges their trip alone and drifter where they shall contact the tourist establishments.

Mannell and Iso-Ahola (1987) added that tourism motivation has four dimensions: physical, cultural, interpersonal, and status and prestige. The physical motivator is directly connected to a person's bodily health, physical rest, participation in sports, and the need for recreation at the beach. Status and prestige motivation refers to tourist self-esteem and personal development. Cultural motivation is the traveler's desire to gain knowledge about the cultural activities of the site destination. Lastly, interpersonal motivation refers to the fact that tourists

want to meet new people, visit friends or relatives, get away from the standard conventions of life, or make new friends.

Fennell (2000) highlighted the need to promote the right kind of tourism, that is, quality and eco-friendly tourism, so the maximum benefit can be harnessed without affecting and altering the physical and social quality.

Lesaca (2012) said that the Philippines' topography is ideal for Agritourism. Agri-tourism farms, such as those in Benguet and Guimaras, are scattered throughout the country. As the Department of Tourism calls them (DOT), leisure farms or farm resorts have sprung up in different regions in the country. These are farms with the resort, accommodation, and dining components. Representatives Gloria Macapagal Arroyo and Diosdado Macapagal Arroyo have filed House Bill No. 1808 in the 15th congress to promote agri-tourism. The bill also proposes tax credits to registered Agri-tourism activities to help offset the expenses of venturing into agri-tourism and provide technical assistance to farmers who wish to enter the Agritourism Business.

Mnguni (2010) emphasized that agri-tourism is increasingly recognized as a means of enterprise diversification for most agricultural producers and in most cases, it is developed and adopted by developed farmers worldwide. Many people's interest in healthy food and sharing that same experience with their immediate families has aroused their curiosity about how crops are produced and livestock is raised. So, has farm tourism sites began to flourish. Farm tourism is the business of attracting visitors to farm areas generally for educational and recreational purposes while encouraging economic activities that can provide both the farm and community additional income (Gabor, 2016).

The development of appropriate agricultural and environmental policies should produce and market agricultural products to create job opportunities in the agricultural and non-agricultural sectors and increase agricultural productivity to national income and rural people (Zunic, 2011). Fleischer and Tchetchik (2006) ask that relationships between rural amenities of tourism development and agriculture are of mutual benefit, in the sense that while Agritourism provides the farmer with supplemental funding to continue his/her activity, the latter is an essential component of Agritourism? Moreover, do tourists farms enjoy economies to the scope and run their businesses more efficiently than farms with only a single activity? They found that farmers seem to benefit from the existence of an active farm on the production side. A farm producing agricultural goods and tourism services appears to use its production factors in producing tourism firms managed by non-farmers.

Indrayanti (2010) stressed that many travelers today choose their destinations based on the eco-friendly business practices followed by hotels and tourist attractions. As part of citizens in a global world, they do not only want to protect the environment, but they also want to witness how it is done and experience it themselves.

Recio et al. (2014) studied the profiles of agri-tourism and its socio-economic and environmental effects on the residents. Moreover, Na Songkhla and Somboonsuke (2012) disclosed a boom of agro-tourism and the promotion of tourism business that is more profitable than agricultural occupation.

Lago (2017) also found that tourism and agriculture linkages were relatively strong. The educational attainment of farmers is a crucial factor for agriculture supply. Civil status and income were significant indicators of tourist demands, while safety and security become the paramount consideration of tourists to visit agri-tourism sites. It was recommended that there is a need to educate farmers to encourage diversification of farms into agri-tourism where market

segmentation is vital for agri-tourism promotion while fostering a community-based agri-tourism in Quezon province is likewise highly recommended.

Further, Barbieri and Tew (2008) revealed that 164 agri-tourism farms show that although most agri-tourism operators do not receive direct sales from this activity, they perceive it as necessary for the continued operation of their farm. Agri-tourism is also perceived as having a positive impact on farm profits. Multiple linear regressions show that physical, agri-tourism, and organizational farm resources are associated with the perceived economic situation of the farm business and with the percentage of farm sales derived from agri-tourism.

DOMAIN OF INQUIRY

The study explored the agricultural resources found in the Municipality of Tuburan and the challenges in local tourism.

METHODOLOGY

This section discusses the research design, research environment, research informants, research instruments, data analysis, and ethical considerations.

Research Design

This study employed the ethnography method that explained the interview process on how the data were gathered. Reeves et al. (2013) explained that ethnography is qualitative research that gathers observations, interviews, and documentary data to produce detailed and comprehensive accounts of different social phenomena.

Research Environment

The Municipality of Tuburan is located in the northwest part of Cebu Province. It is about 106 kilometers from the city of Cebu via the Toledo route, about 78 kilometers via Trans Central Highway, and 96 kilometers via Lugo. It is a second municipal income class municipality in Cebu, Philippines. The municipality has a land area of 224.50 square kilometers or 86.68 square miles, constituting 4.54% of Cebu's total area. Its population, as determined by the 2015 Census, was 63,866. This represented 2.17% of the total population of Cebu province or 0.86% of the overall population of the Central Visayas region. Based on these figures, the population density is computed at 284 inhabitants per square kilometer or 737 inhabitants per square mile. In the 2016 electoral roll, it has 42,647 registered voters. Through the efforts of the municipal mayor of Tuburan, Democrito Diamante, Jr., he was commended in making the breakthrough of developing a homegrown coffee product for Cebu with the assistance of the Department of Environment and Natural Resources, Department of Agriculture, and the Department of Science and Technology.

In 2013, Tuburan was chosen as a beneficiary of the government's Accelerated and Sustainable Anti-Poverty Program, boosting the town's local coffee industry. Government agencies, local government units, and private enterprises collaborate to expand production and markets of coffee growers in the area. About 1000 farmers in Tuburan, Cebu are now enjoying the fruits of the government assisted coffee plantation that covers 2,850 in 16 barangays namely:

Amatugan, Bangkito, Gaang, Kabangkalan, Kalunsing, Kamansi, Kansi, Kaorasan, Kan-An, Mag Antoy, Mag Atubang, Montealegre, Tomugpa, Kalangahan, Bakyawan, and Mag-Alwa.

Research Informants

To provide the data needed by the researcher were, three groups of informants were chosen using the purposive sampling. The first group comprised the ten local tourists who visited the Tuburan coffee. The second group comprised the municipal and provincial tourism personnel, and the third group comprised the five tourist operators. Among the informants, the local tourists of Tuburan coffee comprised 50%; tourism employees, 25%; and tour operators of 25%.

Research Instrument

This investigation used the researcher-made interview guide subjected to content validation by the expert to test the functionality and fitness of the contents to the objectives and the target participants.

Data Analysis

The data collected from the informants' responses were analyzed through themes and sub-themes presentation, using the narrative format. The six steps prescribed by Braun and Clarke (2006) to carry out the thematic analysis are: familiarizing the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report.

Ethical Considerations

The researcher guaranteed the informants' confidentiality and the nature of cooperation. Names and identifying information were not asked during the interview, and all gathered data were destroyed after finalizing the terminal report.

RESULTS AND DISCUSSION

This chapter shows the presentation, analysis, and interpretation of data to answer the problems of the study. Data are presented in themes to explore and understand the existing local agricultural flora in Tuburan, Cebu. The analytical procedure is arranged according to the sequence of specific questions. First, agricultural resources found in Tuburan, Cebu; second, benefits of these local floras to the promotion of tourism industry; and third, the challenging experiences in local tourism.

1. Agricultural Floras Found in Tuburan, Cebu. This part of the chapter presents the information on the potential resources and tourism products that have influenced tourists to visit the Municipality of Tuburan and how these resources and products build a different name and promote tourism and investment in Tuburan. Likewise, reasons for the unpopularity of some agricultural resources will be presented and analyzed.

a. Potential Resources and Tourism Products. Tuburan is an agricultural municipality where tourists come and go. A research question was posed regarding the agricultural resources and tourism products found in the municipality. According to the Informant, 1 and 2 disclosed:

“There are varieties of agricultural resources to be seen in Tuburan in order to attract tourists to visit the place.”

“The most popular product why tourists visit from time to time is the brewed coffee. However, there are also other products but not very popular such as budbud, bibingka and saksak sinagol.”

The tourism products found in the municipality are brewed coffee, *budbud*, *bibingka*, and *saksak*, and *sinagol*. Tuburan coffee brewing is made possible through the initiative of the Department of Science and Technology (DOST) Cebu Provincial Office is also working on packaging coffee grounds to make these more competitive in the local and global market. The DOST is currently allocating funds for the technology upgrading of the current coffee production operations and further packaging improvement through its ASAPP counterpart program, Community Empowerment through Science and Technology. Aside from brewed coffee as the municipality's number one popular tourism product, "budbud" is also available in the public market. Bibingka and saksak sinagol were the least popular tourism products due to lack of promotion.

b. Agricultural Resources and Tourism Product: Building Distinct Label. This section shows the data on labeling or branding the municipality of Tuburan with its most abundant agricultural flora and tourism product. Informant 3 respond that:

“No other product except the Tuburan coffee which is promoted by the local government.”

As revealed during the interview, coffee was rated the highest agricultural flora, and it is just appropriate to be the municipality's available product that serves as its distinct identity. Brewed coffee also got the highest rating from the informants as a tourism product. This implies that coffee, as flora and a tourism product, provides Tuburan a distinct identity from its neighboring municipalities in Cebu, just like the City of Carcar, which is known for its chicharon and ampa. Tuburan is now gradually known for its Tuburan coffee. Indeed, agricultural floras could give places a distinct identity.

c. Benefits of Local Agricultural Resources. Since the Municipality of Tuburan is abundant with cacao, it serves as the local resource that provides income to the local community and attracts the influx of tourists. The initiatives of local tourism stakeholders boiled down to the concept of improving coffee production. With higher production of coffee, Tuburan could now sell coffee to other municipalities and regions. However, the agricultural resources and products are unpopular because of the lack of initiative in promoting the dissemination and advertising from local tourism. Informant 4, 5, 6, 7, 8, 9, 10, and 11 said that:

“To promote tourism and attract other investors to buy Tuburan coffee, the only way is to improve their production.”

“If the production of coffee becomes sufficient, more investors will visit and invest in coffee business.”

“The higher and good quality on the production of coffee would lead investors to come and visit.”

“The most effective in promoting Tuburan coffee is the word of mouth and through branding the product with the name of Tuburan like the Tuburan coffee, coffee product will be patronized not only by the people of Tuburan but also by the neighboring municipalities and provinces.”

“The local government and the private sector lack of promotion.”

“The distance of Tuburan is one of the reasons of the aforementioned experienced while other said the lack of technology causing to a poor product quality is the reason of this unpopularity.”

“It give an identification in the place and also encourages members of the community to actively participate in the promotion of tourism which leads to improving social interactions and relationships among people in the community.”

“All of the informants believed that it is the agricultural resources and products have a positive impact to the community’s continual growth and development.”

So, the local government unit and the local tourism office would like to determine effective marketing strategies in promoting agricultural resources and tourism products. A marketing strategy is quite significant in promoting agricultural resources and tourism products. The strategy must meet the customers' needs and demands. It must be flexible in responding to challenges in customer perceptions and demands, identify and then communicate the benefits of the products in the target market. Finally, determine and monitor the strategy's effectiveness and make an adjustment when it is necessary. Some informants believe that social media could be an effective marketing strategy in advertising agricultural resources. Others believed that partnership linkages with private sectors could be an effective marketing strategy. Conducting agro-fair or exhibits.

According to some informants, conferences on these products could also be an effective marketing strategy. The promotion of agricultural resources and products, especially coffee, could provide socio-economic benefits in the promotion of tourism, improving the way of living of the locals, and the growth and development of the municipality. The informants believe that the agricultural floras of Tuburan, most especially coffee, create boundless opportunities for the community.

People can hone new skills, boost their confidence as hosts or guides, and uplift their morale by alleviating poverty with the job opportunities offered by the tourism industry. Thus, people are empowered.

2. Challenging Experiences. To know whether the tourists visiting the coffee farm were worthwhile, the researcher asked the informants about the challenges encountered that hinder the growth of tourism of the said site. The challenges experienced by the informants during their visits to Tuburan included poor facilities and services in the coffee farm. In order for Tuburan coffee to have a more significant impact on eco-tourism, the researcher asked the informants for their suggestions on improving the tourists' experiences during their visit. Informants 12, 13, and 14 mentioned that:

“There’s a lot to improve in the coffee farm for tourism to flourish of the said place.”

“Safety and health issues are also one of the concerns of the informants during their visit. Another problem is the transportation since the access roads going to the coffee farms are rough making it unsafe and lastly is the absence of communication signals in the mountainous places where agricultural plantations are found also impedes the tourists to visit the place.”

With the problems discovered engulfing the local tourism in the Municipality of Tuburan, the informants suggested that facilities and services in the coffee farms should be improved by providing advanced facilities and equipment. It also suggested that the communication system be improved by requesting cell towers from telecommunications companies. In order to make these destinations accessible, it is suggested that the local government units should concretize roads

people's initiative that comprises the locals should be created for them to act as the front runners of tourism promotion.

IMPLICATIONS FOR PRACTICE

In partnership with the private sector, the government shall undertake the improvement of the existing facilities and the construction of other amenities to attract more tourists and patronize the tourist sites. Also, the Department of Tourism shall organize people's initiatives in order to motivate the locals to participate in the promotion of tourism actively. The Local Government Unit (LGU) should allocate funds to improve facilities, transportation, and communication for the continual improvement of the tourism industry.

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ACADEMIC PERFORMANCE OF GRADE SIX PUPILS IN THE AREA OF MATHEMATICS BASED ON THE COGNITIVELY GUIDED INSTRUCTION (CGI)

Kim Roxan O. Arong

<https://orcid.org/0000-0002-3578-4461>

University of Cebu
Cebu City, Philippines

Yolanda C. Sayson

<https://orcid.org/0000-0003-3716-1003>

uc.ycsayson@gmail.com
University of Cebu
Cebu City, Philippines

Liza Lorena C. Jala

<https://orcid.org/0000-0002-8233-4201>

lizalorenacjala@gmail.com
University of Cebu
Cebu City, Philippines

ABSTRACT

The study assessed the academic performance of grade six elementary pupils in the area of mathematics using Cognitively Guided Instruction (CGI). The students were enrolled at the University of Cebu, Lapu-Lapu, and Mandaue branches for 2017-2018. The study utilized the quasi-experimental method through a teacher-made test. The findings showed that most of the grade six students were 12 years old, females, and had second grades ranging from 76 to 80. During the pretest, most of the grade six students got scores below the passing percentage and had a low mean value, implying their very poor performances in solving math problems. Most of the grade six students' scores improved during the post-test, also evident in the mean value.

Moreover, there was a significant difference between the research subjects' post-test and pretest scores. Therefore, cognitively-guided instruction (CGI) should be incorporated in teaching mathematical problem-solving. Cognitively Guided Instruction (CGI) influence the grade six students' improvement in problem-solving in the mathematics subject. Hence, it is considered the better teaching strategy, which helps grade six students develop a more relevant and improved conceptual understanding and an improved achievement in problem-solving. Moreover, cognitively-guided instruction (CGI) is effective in mathematics class which improves the students' abilities in solving word problems.

Keywords – Teaching, mathematics, cognitively-guided instruction, grade 6, quasi-experimental, Mandaue city, Philippines

INTRODUCTION

The body of knowledge and practice in mathematics is derived from the contributions of thinkers throughout the ages and across the globe. It gives a way to understand patterns, quantify relationships, and predict the future. Math helps people understand the world — and use the world to understand math. The world is interconnected, and everyday math shows these connections and possibilities. The earlier young learners can put these skills to practice, the more likely they will remain in an innovative society and economy (Center for Global Education, n.d.).

The processes of mathematics are the ways of using the skills creatively in new situations. Problem-solving is a mathematical process. It is to be found in the strand of mathematical processes, logic, reasoning, and communication. This side of mathematics enables humans to use the skills in a wide variety of situations (Te Kete Ipurangi [TKI], n.d.). Moreover, problem-solving relates to applying concepts in mathematics which aims to develop the analytical and creative thinking of the students. It also serves as the basis for assessing the students' understanding of the mathematical concepts taught to them. In the class, the students can solve simple to complex equations and word problems. In this manner, their creativity and logical thinking are being enhanced.

Solving word problems enhances logical thinking, which gives the learners the ability to understand and build upon that knowledge without incremental guidance. It also conceptualizes mathematical concepts which make learning more meaningful and exciting in the sense that it relates to students'

real-life scenarios. Every day students have to deal with word problems that encourage them to think, question, develop and test alternative solutions for a specific problem.

Students should not be restricted to solving just one procedural way in formulating solutions. It is because word problems are intended to be solved in various ways since students have different mathematical thinking and understanding. Students should be allowed to engage in multifarious solutions when dealing with word problems as long as it suffices the word problems.

Moreover, mathematics is a subject that is taught from fundamental to tertiary education. It also becomes a subject gradually taught from concrete to abstract. The students must learn this discipline or subject since it has a significant role in solving problems for everyday life. However, some students have some difficulties understanding mathematical concepts, which becomes the reason for their difficulties in doing mathematical calculations.

Since students have different levels of logical skills, their ability to solve word problems also differs. Some manage to answer word problems quickly, but others cannot. They need to analyze the word problems repeatedly to come up with a solution that will lead them to the correct answer.

Department of Education [DepEd] (2016) stipulates that learning mathematics is mental and sequential. Therefore, mathematics education should develop creative thinking where students are free to try their possible solutions. Thus, the K-12 curriculum guide of sixth-graders aims to demonstrate understanding of sequence in forming rules, expressions, and equations in algebra. It focuses on the identified competencies such as formulating the rule for finding the n th term using different strategies, differentiating expression from the equation, translating real-life verbal expressions and equations into letters and symbols, and representing quantities in real-life situations using algebraic expressions and equations.

Students should be taught how to apply their learnings through solving word problems rather than teaching them to solve tasks that require merely numerical computations and memorization of facts and formulas to make learning more relevant and meaningful. Consequently, several students still find solving word problems very difficult. Thus, educational programs were implemented to close the gap of solving word problems.

According to Kusuma and Retnawati (2008), operations that involve whole numbers, fractions, and decimals are essential concepts that students must possess. It is a part of mathematics that is very close to everyday life. Many students have difficulty understanding fractions, especially in word problems. The students' difficulties in solving math word problems on the operation, which involve whole numbers, fractions, and decimals, are caused by students' difficulties in the word problem, students' difficulties in understanding the concept of fractional operations, and students' have fewer numeracy skills and inaccuracy.

Mathematical proficiency is not a one-dimensional trait, and it cannot be achieved by focusing on just one or two of these strands. Helping children acquire mathematical proficiency calls for instructional programs that address all strands. From pre-kindergarten to eighth grade, all students should become increasingly proficient in mathematics. That proficiency should enable them to cope with the mathematical challenges of daily life and continue their study of mathematics in high school and beyond (National Academies of Sciences, Engineering, and Medicine., 2001).

Despite implementing the BEC Curriculum, significant problems still exist, especially on the learners' level of knowledge, mastery, and skills, lack of instructional materials, laboratory apparatuses, and physical equipment, as manifested in the result of the National Achievement Test (NAT). IN THE National Achievement Test (NAT) results of 2012, there are only a few high performing schools with a mean percentage score (MPS) of 86%, which is still categorized as Closely Approximating Master while there are a sizeable number of low performing schools with MPS of 34% and categorized as Low to Absolutely No Mastery. Furthermore, the Percentage of Correct Responses (PCR) per learning competency measured by subject area showed that the pupils' performance in Mathematics is deficient. These problems were manifested in the National Achievement Test conducted by the National Educational Testing and Research Center (NETRC), the agency tasked to conduct research, evaluate, and assess the effectiveness of instruction in the Department of Education (Adora, 2015).

Also, the results from the student's formative and summative assessments in mathematics at the University of Cebu-Lapulapu and Mandaue show low academic performances. Scores are below the passing percentage, and solving word problem which needs logical thinking is the topmost error of the students. It displays that students encountered difficulty setting up and manipulating equations in solving word problems.

As a teacher in elementary mathematics, observations were made regarding the pupils having a hard time in the subject, especially in solving word problems. Only a few can understand, analyze and solve correctly the word problems given for a particular concept in mathematics. Most of them find solving word problems an arduous task. Students begin to lose interest and even dislike mathematics more if they are given word problems to solve. Thus, the researcher conducted this study to determine the effectiveness of using cognitively-guided instruction y in solving word problems in mathematics among the sixth graders of the University of Cebu Lapu-Lapu and Mandaue.

FRAMEWORK

This study is anchored on the Cognitive Behavioral Theory (CBT) of Aaron Beck, which explains how thoughts, feelings, and behaviors interact. CBT focuses mainly on how specific thoughts lead to certain feelings, which, in turn, lead to specific behavioral responses. According to this theory, thoughts are changeable, and by changing thoughts, a person can change his or her feelings and, ultimately, his or her behaviors. It also works in reverse. Changing the behaviors can also lead to changes in how a person feels and ultimately how he or she thinks. Even though feelings cannot be directly manipulated, they can be indirectly changed by changing our thoughts and behaviors (Parvez, n.d.).

Cognitive Behavioral theory points out how a person's cognition affects the emotion and behavior towards different stimuli. Moreover, this theory aims to change the person's irrational or faulty thinking and behaviors through educating the person and reinforcing positive experiences that will eventually lead to fundamental changes in the way a person copes, especially if facing problems (Beck et al., 2015).

Mathematics is integral to all areas of daily life; it affects successful functioning on the job, in school, at home, and in the community. The importance of mathematical literacy and problem-solving is emphasized in the Goals 2000: Educate America Act of 1994 and National Council of Teachers of Mathematics Principles and Standards for School Mathematics (NCTM, 2000).

Teachers must provide students with learning disabilities with scaffolds, such as schemata diagrams when teaching conceptual understanding of key features of the problem. The schematic representation should be more than a simple semantic translation of the problem and should emphasize the mathematical relations in specific problem types to allow students to transform the diagrammatic representation into an appropriate math equation directly. Such representations may be valuable aids in organizing information in word problems, reducing students' cognitive load, and enhancing working memory by directing resources to correctly set up the math equation and facilitate problem solutions (Xin et al., 2005).

Lev Vygotsky called this scaffolding, which was developed as a metaphor to describe the type of assistance offered by a teacher or peer to support learning. In the process of scaffolding, the teacher helps the student master a task or concept that the student is initially unable to grasp independently. The teacher offers assistance with only those skills that are beyond the student's capability. Of great importance is allowing the student to complete as much of the task as possible, unassisted. The teacher only attempts to help the student with tasks that are just beyond his current capability. Student errors are expected, but the student can achieve the task or goal with teacher feedback and prompting. When the student takes responsibility for or masters the task, the teacher begins the process of "fading," or the gradual removal of the scaffolding, which allows the student to work independently (West et al., 2017).

Vygotsky (2014) pointed out that knowledge was not merely handed-on nor discovered by the students, but rather, a part of a process of co-construction. He suggested that teachers assess students' capabilities both when performing alone and when performing with assistance. In this sense, comparisons of students' success in accomplishing specific tasks were found. Students who collaborate and are provided with the assistance needed through scaffolding accomplish more complicated tasks than those doing it by themselves. In this manner, a deeper level of logical thinking and learning was promoted.

Vygotsky (2014) also believed that scaffolding between an adult and a child depends on the Zone of Proximal Development. In the Zone of Proximal Development, the student is assisted

and guided on how to solve a particular task, but it is he/she who does the entire task, so in the latter times he/she will be able to do it without the assistance of teachers and other literate adults. Thus, the distance between the actual development level as determined by independent solving word problems and the level of potential development has been addressed.

Carpenter and Fennema (2015) popularized cognitively-guided instruction, demonstrating that students improved significantly in the informal intuitive knowledge of mathematics. This knowledge served as the foundation of their mathematical understanding. The teacher's role was to facilitate and guide their logical thinking in finding multiple solutions to word problems. Since there were various techniques in solving word problems, it varies from one mathematical word problem to the other. In this way, the students' logical skills are deepened and sharpened (Carpenter et al., 2003).

One's thoughts determine one's feelings and behaviors; however, most students have negative thoughts towards mathematics, specifically solving word problems. The more they dread the subject, the more they exercise faulty thinking. These negative and unrealistic thoughts cause distress resulting in difficulty understanding, analyzing, and applying a particular solution to word problems. Most of the students find mathematics as waterloo, especially in terms of problem-solving. Thus, this theory helps students develop alternative ways of thinking to reduce psychological distress.

Various mathematical programs were proposed and implemented by different educators to lessen the difficulty of problem-solving and portray its functional role in society. Augmenting students' interests in solving word problems is a great help. It enhances their critical and logical thinking by applying mathematics's essence in their real-life activities rather than treating mathematics as an end in itself. Fennema (1992) explained a pervasive view held by teachers, students, and the public that equates with telling students what to learn and how to learn it rather than with guiding students' learning process. Changes in instructional practices must accompany changes in materials.

Berry et al. (2017) believed that teachers and students should dedicate a substantial portion of their time presenting and solving problems since the heart of mathematics is solving word problems. She pointed out that teachers must teach the students the attitude of perseverance upon solving challenging word problems.

In this manner, students will be able to identify and apply strategies needed in solving word problems based on their learnings from previously presented lessons and procedures. Czoher

and Moss (2017) stressed that prior mathematics experiences fall into three categories: classroom experiences, general knowledge about the world, and personal lived experiences. As they studied these processes in which students understand and engage themselves in different problem-solving activities, they found out that due to different life and classroom experiences, learners were drawn to different, distinct, but acceptable mathematical solutions and models. Thus, teachers responded to different answers and built on prior experiences to support the students in mathematical modeling. Teachers must value students' interpretations of the problems, scaffold student thinking by asking questions, invite students to share and explain their mathematical models with the class and choose modeling problems that do not constrain their logical thinking.

Munday (2016) found that large groups of elementary students in the United States were performing below grade level in Mathematics. Thus, this study applied the Cognitively-Guided Instruction (CGI) as the based instruction in order to provide below grade level students many opportunities to engage themselves in solving word problems. It also built conceptual

understanding and critical thinking, which later on play a crucial role in the future mathematical success of the students. It was disclosed that cognitively-guided instruction practices in below-grade level elementary students were effective. Students below grade level could internalize and utilize new and increasingly complex solution strategies after four weeks of CGI-based math instruction. Hence, CGI-based intervention was a practical approach for imploring below grade level students' foundations and understanding of mathematics. Their developed conceptual mathematical thinking had significantly impacted their mathematical growth. Therefore, instead of explicitly teaching isolated skills and procedural ways of solving word problems, teachers must continue to provide challenging opportunities to solve word problems and let students be led by their logical thinking.

On the other hand, another study conducted by Sahin (2015) dealt with the effect of teachers attending cognitively-guided instruction professional training towards the development of their students' problem-solving strategies and mathematics achievement in general. The results showed a significant difference between students of CGI and non-CGI teachers. Students under the CGI supervision were able to invent their strategies and better understand mathematical concepts as they owned their strategies towards solving word problems compared to those with non-CGI teachers.

In their study, Carpenter and Fennema (1992) revealed that teachers' knowledge and beliefs about students' thinking are related to students' achievement. There were significant differences between the classes using cognitively-guided instruction (CGI) and control classes on the emphasis on problem-solving and low-level skills, the freedom given to students to construct their strategies for solving problems, the teachers' knowledge of their students' thinking, and the student's achievement in both problems solving and skills

OBJECTIVES OF THE STUDY

This study determined the use effectiveness of Cognitively Guided Instruction (CGI) the for improving the mathematics and problem-solving skills of the sixth graders, Basic Education Department of University of Cebu Lapu-Lapu and Mandaue, S.Y 2017- 2018. Specifically, this investigation aims to present the profile of the subjects in terms of age, gender, and second grading grade; and the pretest and posttest scores.

RESEARCH METHODOLOGY

This section discusses the research design, research environment, research participants, research instrument, research procedures, and data treatment.

Research Design

This study utilized the quasi-experimental pre-post with no control group design to determine whether (CGI) cognitively guided instruction leads to the sixth graders' improvement in mathematics and problem-solving competencies. In the two sections of grade six pupils, Respect and Patience, the researcher conducted a pretest to determine their present abilities to solve math problems, and then the cognitively-guided instruction was applied as the intervention.

Afterward, the posttest was conducted to determine whether CGI was effective in improving the participants' math problem-solving skills.

Research Environment

The study was conducted at the University of Cebu Lapu-Lapu and Mandaue Basic Education Department. The Elementary Department has 16 sections. One section for playgroup, nursery, and kindergarten, while grades 1 - 6 comprised two sections for each grade level. The facilities in the department include one 7-story building, one elementary science laboratory, one computer laboratory, one clinic, one principal's office, one prefect of discipline's office, and one covered court.

Research Participants

The research participants were the grade six pupils of the Basic Education Elementary Department of University of Cebu Lapu-Lapu and Mandaue, S.Y 2017-2018. Two sections were used in the study: grade six - Respect and grade six – Patience.

Before the end of the school year, the grade 5 advisers divided their promoted pupils according to gender, name, grade and section, average grades, and classroom performance. These lists were submitted to the Principal's Office for verification of sectioning. Thus, before the start of the succeeding school year for grade six pupils and after weighing the academic factors, the tentative sectioning was already in place.

Research Instruments

The researcher utilized teacher-made tests. The focus was on solving word problems involving Basic Algebra. A pretest and posttest questionnaires were used separately. The scores obtained from the word problem-solving test were recorded and tabulated. The researcher sent letters to the Basic Education Department principals of the University of Cebu and Lapu-Lapu and Mandaue and the University of Cebu Main Campus requesting permission to let the grade six pupils take the test.

Dry run testing was conducted at the Basic Education Department of the University of Cebu Main Campus last January 8, 2018, among the four sections of the said department. Pretest was conducted last January 09, 2018. Posttest was conducted last February 28, 2018 around 9:45-10:45 for grade six-respect and 12:30-1:30, 2018 for grade six- patience.

Research Procedures

The researcher sent letters to the Basic Education Department Principal of the University of Cebu Lapu-Lapu and Mandaue requesting permission to conduct a study. Then, a dry run testing was conducted among four sections of grade six pupils of the University of Cebu Main Campus department. After which, the grade six pupils' academic achievement in solving word problems was assessed through individual and group activities involving solving algebra word problems dated January 10, 2018, to February 27, 2018. Pretest and posttest were conducted.

Treatment of Data

The statistical tools used to summarize, analyze and interpret the data from the subjects are simple percentages to summarize the pretest and posttest performances of the subjects; mean and standard deviation to analyze further the pretest and posttest performances of the subjects; and

paired t-test to determine the significance of the difference between the pretest and posttest performances of the subjects.

RESULTS AND DISCUSSIONS

This section presents the profile of the research participants, their pretest performance, difficulty index for the pretest performance, posttest result, difficulty index for the posttest performance, and results on the test of significant difference between the pretest and posttest performance in problem-solving tests. Table 1 presents the profile of the research participants.

Table 1. Profile of the Research Participants (n=76)

Basis	Grade Six-Section Respect		Grade Six- Section Patience	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Age				
11 years old	11	28	12	32
12 years old	23	59	20	54
13 years old	4	10	4	10
14 years old	1	3	1	3
Total	39	100	37	100
Gender				
Girls	23	59	20	54
Boys	16	41	17	46
Total	39	100	37	100
Second Grading Grade				
70-75			2	5.40
76-80	12	30.77	14	37.84
81-85	9	23.08	11	29.73
86-90	6	15.38	7	18.92
91-95	9	23.08	3	8.11
96-100	3	7.69	0	0.00
Total:	39	100.00	37	100.00

As shown in Table 1, most of the research participants were aged twelve (12) years old. Their present age during the study corresponds to the expected age level of grade six students under the K to 12 Enhanced Basic Education program.

Moreover, more than half of the research participants (59% for Section Respect and 54% for Section Patience) were females compared to males. These results mean that the grade six student population in the University of Cebu-Lapulapu and Mandaue Basic Education is dominated by females.

As seen in their second grading period, it is evident that more students were performing well in grade six respect based on the number of students who got grades from 86 to 90 and 91 to 95, which sums up to fifteen (15) students. Three (3) students excelled and attained grades ranging from 96 to 100. However, twelve students got grades ranging from 76-80. On the other hand, half of the grade six-patience pupils were not performing well since two (2) of them got grades from 70-75, while fourteen (14) pupils got grades within the level of 76-80. Nobody attained a grade ranging from 91 and above. It depicts the difference in the students' mathematical achievement of both sections.

Aside from the second grading grades of the research participants, the researchers conducted a pretest to assess their level of abilities in solving math problems.

Table 2 presents the data relating to the grade six students' performance in problem-solving during the pretest.

Table 2. Research Participants' Pretest Performances in Problem-Solving

Pretest Scores	Grade Six-Respect		Grade Six-Patience		Description
	No. of Students	Percentage (%)	No. of Students	Percentage (%)	
19-20					Very Good
16-18	5	12.82	1	2.70	Good
15					Fair
11-14	16	41.03	12	32.43	Poor
10 and below	18	46.15	24	64.87	Very Poor
Total:	39	100.00	37	100.00	
Mean	9.59		8.76		
SD	4.76		3.84		

As shown in Table 2, the grade six pupils in Section Respect obtained a mean score of 9.59 with a standard deviation of 4.76, and the majority of them (46.15%) got a score of 10 and below out of 20 items interpreted as *very poor*. The passing score of 20 is 15. Based on the scores, only 5 out of 39 students got the passing score in the pretest. The mean was lower than the passing score, which implied a *poor* performance from the group. Though twenty-one students got scores of 11 and above, the mean value was still lower than the passing score due to eighteen students who got scores of 10 and below, which affects the mean value.

On the other hand, the grade six pupils in section Patience obtained a mean score of 8.76 with a standard deviation of 3.84, and the majority of them (64.87%) got a score of 10 and below out of 20 items. This means that the research participants had *very poor performance*. Out of thirty-seven (37) students, only one passed during the pretest. The result showed that students found solving word problems very difficult because they lack the skills of understanding, analyzing, and solving mathematical word problems.

A difficulty index was used to concretize the difficulty in solving the word problems encountered by the students. Items with a difficulty index from 0.00-0.20 means very difficult, 0.21-0.40 means complicated, 0.41-0.60 means moderately difficult, 0.61-0.80 means easy, and 0.81-1.00 means very easy.

Table 3 shows the difficulty index of research participants' pretest performances in problem-solving.

The students from grade six-section Respect found item numbers 1, 2, 13, 14,15,17,18 and 20 *very difficult* based on the difficulty index, ranging from 0.01- 0.20, while for item numbers 3,4,5,6 and 16, the difficulty index of the research participation ranged from of 0.21-0:40, which means that the grade six research participants had *difficulty in solving the problem*. Moreover, for items 7, 8, 9, 10, 11, 12, and 19, the difficulty index ranged from 0.41-0.60, which means that the research participants experienced *moderate difficulties in solving the problems*.

On the other hand, grade six-section Patience found item numbers 1,5, 10, 13,15,17, 18,19, and 20 *very difficult based on the difficulty index* of 0.00-0.20, while item numbers 4,7,8,11 and 12 seemed too *difficult for them as denoted by the difficulty index* of 0.21-0.40. Items 2,

3,6,9,14, and 16 were *moderately difficult* for the research participants, as shown by the difficulty index from 0.41-0.60.

Table 3. Research Participants' Difficulty Index for the Pretest Performances in Problem Solving

Item No.	Grade Six-Respect			Grade Six-Patience		
	No. of students from UG-LG who got it right	Difficulty Index	Difficulty Level	No. of students from UG-LG who got it right	Difficulty Index	Difficulty Level
1	7	0.17	Very Difficult	1	0.03	Very Difficult
2	8	0.20	Very Difficult	8	0.22	Difficult
3	17	0.44	Moderately Difficult	8	0.22	Difficult
4	19	0.49	Moderately Difficult	15	0.41	Moderately Difficult
5	20	0.51	Moderately Difficult	7	0.19	Very Difficult
6	18	0.46	Moderately Difficult	14	0.38	Difficult
7	12	0.31	Difficult	15	0.41	Moderately Difficult
8	15	0.38	Difficult	17	0.46	Moderately Difficult
9	13	0.33	Difficult	14	0.38	Difficult
10	8	0.21	Difficult	7	0.19	Very Difficult
11	13	0.33	Difficult	20	0.54	Moderately Difficult
12	13	0.33	Difficult	17	0.46	Moderately Difficult
13	6	0.15	Very Difficult	0	0	Very Difficult
14	5	0.13	Very Difficult	13	0.36	Difficult
15	3	0.08	Very Difficult	7	0.19	Very Difficult
16	19	0.49	Moderately Difficult	14	0.38	Difficult
17	7	0.17	Very Difficult	0	0	Very Difficult
18	5	0.13	Very Difficult	2	0.05	Very Difficult
19	15	0.38	Difficult	4	0.11	Very Difficult
20	2	0.05	Very Difficult	0	0	Very Difficult

These items showed the difficulty encountered by students in solving word problems with competencies of defining a variable in an algebraic expression and equation and finding the value of expressions and equations in letters and symbols. Moreover, those items which the grade six pupils find *very difficult to solve* contained the competencies of expressing one value as a fraction of another given ratios; age problems in solving the value of one variable when the sum was given in order to suffice the solution; and finding how many times one value is as immense as another and finding a missing term showed that students had not grasped and mastered these concepts. Thus most of them were not able to answer correctly.

In their pretest, the poor performances of grade six students needed to be given an action; thus, cognitively guided instruction (CGI) was used as a strategy in solving mathematical word

problems to help the students in their mathematics achievement, especially in solving word problems.

Based on the pretest results, the research applied cognitively-guided instruction (CGI) in teaching math as an intervention. Table 4 presents the data pertaining to the research participants' posttest performances in problem-solving.

Table 4. Posttest Performances in Problem Solving

Posttest Scores	Grade Six-Respect		Grade Six-Patience		Description
	No. of Students	Percentage	No. of Students	Percentage	
19-20	5	12.82	3	8.11	Very Good
16-18	13	33.33	7	18.92	Good
15	2	5.13	4	10.81	Fair
11-14	10	25.64	12	32.43	Poor
10 and below	9	23.08	11	29.73	Very Poor
Total:	39	100.00	37	100.00	
Mean	13.82	13.03			
SD	4.48	4.09			

As shown in Table 3, the Grade Six pupils in section, Respect obtained a mean score of 13.82 with a standard deviation of 4.48, and more of them (33.33%) got a score between 13 to 16 out of 20 items. This indicates that their performance was good. Based on the scores, twenty (20) students passed the posttest, which is five more than half of those who passed their pretest. The mean value increases from 9.59 to 13.82, implying that the cognitively-guided instruction (CGI) influenced the research participants' mathematical achievement in solving word problems.

On the other hand, the grade six pupils in section Patience obtained a mean score of 13.03 with a standard deviation of 4.0, and more of them (32.43 %) got a score of 11 to 14, indicating that they had poor performance. Though it was still below the passing score, the research participants improved their mathematical achievement from very poor to poor, with fourteen (14) students who could pass the posttest. The increase of the mean value implied an improvement in their scores or performance from pretest to posttest. The results of their posttest showed a positive effect on research participants' mathematic competencies of when cognitively-guided instruction (CGI) was applied by the teacher.

Table 5 presents the research participants' difficulty index during the posttest performances in problem-solving.

Table 5. Research Participants' Difficulty Index during the Posttest Performances in Problem Solving

Item No.	Grade Six Respect			Grade Six-Patience		
	No. of students from UG-LG who got it right	Difficulty Index	Difficulty Level	No. of students from UG-LG who got it right	Difficulty Index	Difficulty Level
1	10	0.26	Difficult	13	0.35	Difficult
2	12	0.31	Difficult	5	0.14	Very Difficult
3	22	0.56	Moderately Difficult	10	0.27	Difficult
4	21	0.54	Moderately Difficult	19	0.51	Moderately Difficult
5	19	0.49	Moderately Difficult	9	0.24	Difficult
6	20	0.51	Moderately Difficult	13	0.35	Difficult
7	14	0.36	Difficult	15	0.41	Moderately Difficult
8	17	0.44	Moderately Difficult	15	0.41	Moderately Difficult
9	14	0.36	Difficult	19	0.51	Moderately Difficult
10	11	0.28	Difficult	18	0.49	Moderately Difficult
11	15	0.38	Difficult	20	0.54	Moderately Difficult
12	16	0.41	Moderately Difficult	20	0.54	Moderately Difficult
13	9	0.23	Difficult	5	0.14	Very Difficult
14	10	0.26	Difficult	16	0.43	Moderately Difficult
15	12	0.31	Difficult	18	0.49	Moderately Difficult
16	17	0.49	Moderately Difficult	17	0.46	Moderately Difficult
17	12	0.31	Difficult	6	0.16	Very Difficult
18	15	0.38	Difficult	14	0.38	Difficult
19	12	0.31	Difficult	7	0.19	Very Difficult
20	14	0.36	Difficult	7	0.19	Very Difficult

For question item numbers 1,2,7,9,10,11,13,14,15,17,18,19, and 20, the performance of the research participant during the posttest had a difficulty index of 0.021 to 0.40, which means that they experienced difficult in solving the word-problems, while for item numbers 3,4,5,6,8,12, and 16, their posttest performance results to the difficulty index of 0.41-0.60. These results mean that they find the problems *moderately difficult*. Although none of them found any item easy or very easy, it is evident that they could apply the cognitively-guided instruction in their posttest because of the increase in the number of students who got the item correctly.

On the other hand, the performance of the grade six pupils in section Patience in the posttest showed a positive result. However, for question item numbers 2,13,17,19, and 20 the difficulty index was 0.00-0.20. These data denote that they find the problems *very difficult*, while

for item numbers 1, 3, 5, 6, and 18, the difficulty index was within 0.21-0.40, indicating their difficult experience in solving the problems.

In addition, for item numbers 4,7,8,9,10,11,12,14,15 and 16, the research subjects' post test performance had a difficulty index of 0.0411-0.60, which denotes that they find the problems as *moderately difficult*. The number of students from grade six-section Patience who got the item correctly increases.

The positive result of their research participants' posttest performance showed that the use of cognitively-guided instruction (CGI) helped the students solve word problems. Carpenter and Fennema (2015) disclosed that as teachers learn to understand better how children's mathematical thinking develops, their teaching pedagogies shift in ways reflected in students' learning. In this manner, the deeper conceptual understanding of students in mathematics was enhanced.

Table 6 presents the test results of significant differences between the research participants' pretest and posttest performances.

Table 6. Tests of the Significance of the Differences Between the Research Participants' Pretest and Posttest Performances

Pretest vs Posttest Sections	p-value	Level of Significance	Decision on Ho	Interpretation
Grade 6- Respect	8.39 E-14	0.05	Reject Ho	Significantly different
Grade 6- Patience	4.05 E-14	0.05	Reject Ho	Significantly different

As shown in Table 6, the test performance of the pupils for two sections in Grade 6 (Sections Respect and Patience) had the p-values of 0.0000000000000839 and 0.0000000000000405, respectively, lesser than the level of significance, which is 0.05, this led to the rejection of the null hypothesis. The results mean that there was a significant increase in the research participants' performances from the pretest to the posttest results or a significant improvement in the scores of the pupils in the posttest. Hence, it also implies that cognitively-guided instruction (CGI) influenced or impacted the mathematical achievement and improvement in problem-solving skills of the grade six students. So it is recommended that the mathematics teachers migrate from traditional mathematics teaching to the application of cognitively-guided instruction strategy, especially in solving word problem activities.

Carpenter et al. (2003) pointed out that if the teachers wanted to give children the opportunity to build their understanding from within, they need to understand how children think about math. By this, they can assess their logical thinking accompanied with the guidance of the CGI for teachers to improve gradually. Thus, providing students opportunities of solving word problems will allow them to exercise their higher-order thinking skills in arriving at various solutions. Different strategies should be applied in mathematics rather than one procedural way to make learning more relevant and meaningful.

In addition, Carpenter et al. (2003) found that the conceptual understanding built by children in their elementary school will provide them with a solid basis for extending their knowledge of arithmetic to learn algebra. It was pointed out that students who learn to articulate and justify their mathematical ideas, reason through their own and others' mathematical explanations, and provide a rationale for their answers develop a deeper understanding that will contribute to their mathematical success.

In this investigation, the results showed that cognitively-guided instruction (CGI) helped teachers better understand the different logical skills of the students and create challenging word problems to enhance their problem-solving skills. This result relates to Vygotsky's explanation of cognitively-guided instruction (CGI), which is scientific research in the development of children's mathematical thinking that provides a basis for teachers how to interpret and reframe their thinking towards the students' mathematical thinking.

Thus, cognitively-guided instruction (CGI) should be implemented in Mathematics class to improve the students' abilities in solving word problems. In this manner, a teacher can better recognize and support children's use of the different mathematical concepts to deepen their understanding and provide them with a solid foundation for learning mathematics.

CONCLUSION

Cognitively Guided Instruction (CGI) influences the grade six students' improvement in mathematics problem-solving. Hence, it is considered the better teaching strategy, which helps grade six students develop a more relevant and improved conceptual understanding and problem-solving achievement. Moreover, cognitively-guided instruction (CGI) is effective in mathematics class which improves the students' abilities in solving word problems. In this strategy, the teacher can better recognize and support children's use of the different mathematical concepts to deepen their understanding and provide them a solid foundation for learning mathematics.

RECOMMENDATIONS

Based on the study's findings, the researcher recommends the following: apply the teaching lesson design geared towards improving the logical skills of the students in solving word problems and conduct a seminar-workshop for teachers on how to implement cognitively-guided instruction (CGI) in math classes.

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UNIVERSITY OF CEBU - MAIN CAMPUS

255-7777 LOC. 4134

uc.ycsayson@gmail.com/judygimena@gmail.com

